THE AMERICAN GAS LIGHT JOURNAL

PUBLISHED WEEKLY, AT NO. 42 PINE STREET.

VOLUME XCVII., No. 2. Whole No. 1,935. | NEW YORK, MONDAY, JULY 8, 1912. | Subscription, $3 Per Year. $4 Canada, $5 Foreign.

INDEX TO CONTENTS, PAGE 17 . . . . . ADVERTISERS' INDEX, PAGE 22.

Riter-Conley Manufacturing Company

STEEL CONSTRUCTION

Pittsburgh

LIBRARY OF CONGRESS
JUL 8 1912
SMITHSONIAN DEPOSIT

GAS OVENS VS. VERTICAL RETORTS.

Berlin, Germany.

We are building a battery of Koppers horizontal Cross Regenerative Gas Ovens for the Berlin Gas Company.

Isn't that the place where they are supposed to have Dessau Verticals in their highest state of perfection?

It surely is, but the "World do move," and the Berlin Gas Company is wide awake.

Birmingham, England.

Here they have horizontals, inclines, and two different types of continuous verticals; and we are building a battery of cross regenerative gas ovens with a guarantee to produce better carbonizing results than they have obtained on any of their different types of retorts.

They Will All Come To It.

See our Brochures Nos. 3 and 4.

H. KOPPERS COMPANY,

CONSTRUCTORS OF BY-PRODUCT COKE AND GAS OVENS,

5 S. Wabash Avenue, - - - - Chicago, Illinois.

THE AMERICAN
GAS LIGHT JOURNAL

VOL. XCVII., No. 2. NEW YORK, JULY 8, 1912. WHOLE NO. 1,935.

CONTENTS.

An Asterisk (*) Denotes an Illustrated Article.

House Piping and Fixture Rules, New York City 17

Proceedings, Eighth Annual Meeting, Illinois Gas Association—
Continued from Page 7..... 18

Second Day, Morning Session—Referring to the Spitzglass Paper on Flow of Gas Formulas—Second Day, Afternoon Session—*The High Pressure Distribution System, by Mr. J. B. Hirst—Discussion—Additional Applications for Membership.

Proceedings, Fourth Annual Meeting, Southern Gas Association—
Continued from Page 12..... 20

Second Day, Morning Session—Discussing the Dains' Paper on Gas Lighting in the South—Telegram to the Centenary Assemblage—Committee on Time and Place—An Invitation and an Acknowledgment—Second Day, Morning Session—A Practical Demonstration, by Mrs. S. R. Dull—Discussion.

EDITORIALS—
Briefly Told 24

Gas Uses in the South—Chicago Public Lighting, 1911—Brooklyn Union Gas Company's Rooms—Personal—The H. L. Doherty Managers' Convention—Death of Mr. A. E. Stevens—Current Mention.

Publications..... 25

MANAGEMENT AND COMMERCIAL METHODS..... 30

*The Ideal Fuel Appliance Company's Dishwasher.

ITEMS OF INTEREST FROM VARIOUS LOCALITIES..... 30

Personal—New Honors for Dr. L. A. Levy—Information as to a Question—Scholarships, Electrical Engineering Course, Mass. Inst. Technology—Ahoy! In Boston Harbor!—Brother Beck an Easy Winner in the Northumberland (Pa.) District—Mr. Anderson is Only Loaned to Pennsylvania—Something from St. Joseph, Mo., which Shows that Mr. K. M. Mitchell is Himself Again—If George McDonald Only Would?—Mr. A. B. Norton Goes to Rome, N. Y.—At Work on the Billings (Mont.) Plant—And Other Items.

Recent Patent Issues..... 31

The Market for Gas Securities..... 33

Meeting Times of the Various Gas Associations..... 32

Public Lighting Table for July, 1912 (Advertising Section)..... 27

House Piping and Fixture Rules, City of New York.

The officials of each of the five boroughs of Greater New York have adopted the following rules and regulations regarding house piping and fixtures:

Gas Piping and Fixtures.—Hereafter the gas piping and fixtures in all new buildings and all alterations and extensions made to the gas piping or fixtures in old buildings must be done in accordance with the following rules, which are made in accordance with the provisions of Section 89 of the Building Code.

For additional requirements of public buildings, theaters, and places of assemblage, see Part XXI. of the Building Code.

Before the construction or alteration of any gas piping in any building or part of any building, a permit must be obtained from the Superintendent of Buildings. This permit will be issued only to a registered plumber. Small alterations may be made by notifying the Bureau of Buildings, using the same blank forms provided for alterations and repairs to plumbing.

All gas pipe shall be of the best quality wrought iron or steel and of the kind classed as standard pipe, and shall weigh according to the following scale:

Diameters.	Weights per Linear Foot.
⅜ inch	0.56 pound.
½ "	0.85 "
¾ "	1.12 pounds.
1 "	1.67 "
1¼ "	2.24 "
1½ "	2.68 "
2 "	3.61 "
2½ "	5.75 "
3 "	7.54 "
3½ "	9.00 "
4 "	10.66 "

No pipe allowed of less than ⅜ inch in diameter.

All fittings (except stopcocks or valves) shall be of malleable iron.

There shall be a heavy brass straightway cock or valve on the service pipe immediately inside the front foundation wall. Iron cocks or valves are not permitted.

Where it is not impracticable so to do, all risers shall be left not more than 5 feet from front wall.

No pipe shall be laid so as to support any weight (except fixtures) or be subjected to any strain whatsoever. All pipe shall be properly laid and fastened to prevent becoming trapped, and shall be laid, when practicable, above timbers or beams instead of beneath them. Where running lines or branches cross beams, they must do so within 36 inches of the end of the beams, and in no case shall the said pipes be let into the beams more than 2 inches in depth. Any pipe laid in a cold or damp place shall be properly dripped, protected and painted with two coats of red lead and boiled oil or tarred.

No gas pipe shall be laid in cement or concrete unless the pipe or channel in which it is placed is well covered with tar.

All drops must be set plumb and securely fastened, each one having at least one solid strap. Drops and outlets less than ¾ of an inch in diameter shall not be left more than 1 inch below plastering, center-pieces or woodwork.

All outlets and risers shall be left capped until covered by fixtures.

No unions or running threads shall be permitted. Where necessary to cut out to repair leaks or make extensions, pipe shall be again put together with right and left couplings.

No gasfitters' cement shall be used, except in putting fixtures together.

All gas brackets and fixtures shall be placed so that the burners of same are not less than 3 feet below any ceiling or woodwork, unless the same is properly protected by a shield, in which case the distance shall not be less than 18 inches.

No swinging or folding gas brackets shall be placed against any stud partition or woodwork.

No gas brackets on any lath and plaster partition or woodwork shall be less than 5 inches in length, measured from the burner to the plaster surface or woodwork.

Gas lights placed near window curtains or any other combustible material shall be protected by a proper shield.

Gas outlets for burners shall not be placed under tanks, back of doors or within 4 feet of any meter.

Outlets for gas ranges shall have a diameter not less than required for six burners, and all gas ranges and heaters shall have a straightway cock on service pipe.

When brass piping is used on the outside of plastering or woodwork, it shall be classed as fixtures.

All brass tubing used for arms and stems of fixtures shall be at least No. 18 standard gauge and full size outside so as to cut a full thread,

All buildings shall be piped according to the following scale:

Diameter.	Length.	Burners, No.
¼ inch	26 feet.	3
½ "	36 "	6
¾ "	60 "	20
1 "	80 "	35
1¼ "	110 "	60
1½ "	150 "	100
2 "	200 "	200
2½ "	300 "	300
3 "	450 "	450
3½ "	500 "	600
3 "	600 "	750

All threads on brass pipe shall screw in at least $\frac{1}{16}$ of an inch. All rope or square tubing shall be brazed or soldered into fittings and distributors, or have a nipple brazed into the tubing.

All cast fittings, such as cocks, swing joints, double centers, nozzles, etc., shall be extra heavy brass. The plugs of all cocks must be ground to a smooth and true surface for their entire length, be free from sandholes, have not less than ¾ of an inch bearing (except in cases of special design), have two flat sides on the end for the washer, and have two nuts instead of a tail screw. All stop pins to keys or cocks shall be screwed into place.

After all piping is fitted and fastened and all outlets capped up, there must be applied by the plumber, in the presence of an inspector of the Bureau of Buildings, a test with air to a pressure equal to a column of mercury 6 inches in height, and the same to stand for 5 minutes; only mercury gauge shall be used. No piping shall be covered up, nor shall any fixture, gas heater or range be connected thereto until a card showing the approval of this test has been issued by the Superintendent of Buildings.

No meter will be set by any gas company until a certificate is filed with them from the Bureau of Buildings certifying that the gas pipes and fixtures comply with the foregoing rules.

Modifications.—When for any reason it may be impracticable to comply strictly with the foregoing rules, the Superintendent of Buildings shall have power to modify their provisions so that the spirit and substance thereof shall be complied with. Such modifications shall be indorsed upon the permit over the signature of the Superintendent of Buildings.

[Continued from p. 7.]

PROCEEDINGS OF THE EIGHTH ANNUAL MEETING, ILLINOIS GAS ASSOCIATION.

Held in the Auditorium Hotel, Chicago, March 20 and 21, 1912.

Second Day—Morning Session.

The President—The next paper is by Mr. J. B. Hirst, on "The High Pressure Distribution System." I was asked to read this paper for him. It is written in connection with the succeeding paper, by Mr. J. M. Spitzglass, on the "Flow of Gas Formulæ." As Mr. Hirst is not here we will call on Mr. Spitzglass to read his paper first. Mr. Spitzglass has many tables and charts in connection with his paper, some of which were placed on the wall. I am sorry that we could not have them on a screen, and further that it is a most excellent paper on this subject. On a quick looking through it you will note it is full of tables and formulæ, etc., which are hard to follow. Mr. Spitzglass will just touch the important points, to show you what results he has obtained, instead of showing how he worked up to them.

[Mr. Spitzglass then read his paper on "Flow of Gas Formulæ, Derived and Checked by Experimental Data, with Diagrams for Figuring the Flow of Gas in Street Mains and Services." For the text of the paper, see Journal, Vol. XCVI., pp. 269, 290 and 312.]

The President—Everyone present must appreciate the value of this paper, in that it is one of the best presented to the Illinois Gas Association, in my opinion. It is a wonderful work and I wish conditions were such that we could give it more time. Mr. Spitzglass has given this matter a great deal of time and thought, for he has been working on it for 2 years or more to arrive at the conclusions reached.

Mr. Spitzglass—If anyone of you will state in writing to me any question or suggestion that comes to him, I will be glad to answer it. If you do, write to the Peoples Gas Light and Coke Company, and we will answer the questions you many bring up.

Mr. Harper—If this is not an inopportune time, I move a vote of thanks to Mr. Spitzglass for his very able paper. We feel it is right and that we should express our appreciation of it. [Seconded and adopted by rising vote.]

Mr. Spitzglass—Let me say a few words in regard to this. Much credit is due Mr. Harper himself. I did not mention his name in the paper because it was suggested we should not be personal. But as Mr. Harper conducted those experiments, which are the main part of the paper, I feel that I am at liberty to mention it to you at this time.

An adjournment to 2 P.M. was ordered.

Second Day—Afternoon Session.

The President—We will now take up the paper by Mr. J. B. Hirst, of Chicago, on

THE HIGH PRESSURE DISTRIBUTION SYSTEM.

We are now living in an age of high efficiency, for competition has driven us to a realization of the fact that we must make our customer use every heat unit sold to him. The surest way to accomplish this is to see that his appliance, whatever it may be, is working at its highest efficiency. The great army of engineers employed in the gas industry to-day is at work inventing, designing and building appliances which shall give the consumers the best results with the least consumption of gas.

We are to-day establishing and maintaining schools the purpose of which is to teach the consumer to operate his appliance in such manner that the gas for which he pays shall not be wasted, but shall be used to his advantage. In the design and operation of this appliance two things have to be considered, viz.: The quality of the gas and the pressure. In any given city the quality of the gas is always known and may be figured on as a constant. Knowing the quality, our appliance engineer asks at what pressure the gas is delivered to the consumer's meter. Upon receiving his answer he proceeds to design his appliance, build it, install and, in due course of time, thoroughly educate the consumer in its use.

Having an efficient appliance, designed and adjusted to operate on a given quality of gas, which our works or our gas fields turn out for us, and operated by a consumer who is educated in its use, only one factor remains to be regulated, the pressure. This pressure being under our constant, almost instantaneous control, is, therefore, the key to our high efficiency system. Our appliance engineer does not tells us that our pressure shall be this or that, but he does demand that it shall be uniform. It is this demand for uniform pressure at the consumer's meter that has brought about the development of the various types of high pressure distribution systems now in use.

In order to bring out the steps which have been taken, or which might have been taken, in the development of high pressure distribution, let us consider an imaginary average city of, say, 40 years ago, having a population of 100,000. This city, we will say, is built on a river, lake or ocean, and has, after the fashion of most cities, grown in a very one-sided way. That is to say, its business center and most densely populated sections are located at a considerable distance from its geographical center. When the gas industry first entered works were built along the water front, where cheap water and low freight rates were to be had. Holders were built at the works of sufficient capacity and weight to handle the gas output on a small low pressure main system.

After 10 or 15 years we find the rate of consumption increased to such an extent that new and larger holders are needed, and that it has become necessary to lay larger feeder mains from the gas works to points at some distance out in the city. These new mains and holders make the distribution problem very easy for another term of years. During this second period, however, it is found necessary to increase the pressure on the feeder lines at the works during the peak load hours, in order to supply the consumers on the outskirts of the system. This increase is accomplished by using the weight of the new holders applied through valves on the holder outlets.

Only a few more years bring us to the point where, even with the full holder weights on the mains, the outlying consumers do not get sufficient pressure. One of two things, perhaps both, are now done. The management decides to build another large holder on the outskirts of the city, with a large through main connecting it to the works, for the transfer of gas during light load hours, or he decides to install low pressure exhausters or boosters at the works to increase the main pressure above the holder pressure. These steps give temporary relief, but at the same time they develop bad distribution

conditions. The consumers near the holders get an unsatisfactory high pressure during peak load hours, while those on the outskirts have a pressure that is insufficient. Appliances which are adjusted for peak load pressure will not work economically at other hours during the day. Just at this time the practicability of the high pressure distribution has been thoroughly demonstrated. The manager, after a careful study of his plant, decides that such a distribution system is necessary, and proceeds to design one to fit his wants. We will say that two of the distribution centers for the new system are already fixed at the two manufacturing stations and a third at the outlying holder already built. The manager now begins to figure.

He estimates, from the average percentage increase in his output for the past few years, what his maximum daily output will be 2 years hence. This maximum day 2 years hence he divides into his present holder capacity. If the resulting figure is 75 per cent., he decides to use his present holders. If the figure is less than 75 per cent., he decides to put in another holder. We will say that his 2 works, with their holders, and the one outlying holder already in, are sufficient for his needs. With a map of his city before him, he divides his territory into approximate square mile sections. From his bookkeeping department he gets the gas consumed in each of these sections during the maximum month of the preceding year. Knowing this maximum consumption in each square mile, and the total consumption for the same month, he can get each square mile's percentage of the total. He now refers to the maximum amount of gas sent out in his entire city in 1 hour of the preceding year, and takes each square mile's percentage of that, the result obtained being the maximum per hour for each square mile.

Having entered these figures, each in its particular section on the map, he proceeds to locate his load center. This he does in the following manner:

The center of each square mile section is projected upon a base line drawn on the east margin of the map. A point is selected on the base line at the left of the projected points and the distance of this point from each of the projected points is measured. Remembering that the load delivered through a given size of pipe is in proportion with the square root of the length, the square root of each distance is now multiplied by the maximum hour consumption in its corresponding square mile. The sum of these products divided by the total maximum hour consumption in the entire city gives the square root of the distance of a load center line from the selected point at the left on the base line. This load center line is drawn perpendicular to the base line, and is extended across the map to the western boundary of the city.

Having located this east and west line, the process just described is repeated in every detail, using as a base a line drawn perpendicularly to the first base and along the northern margin of the map. The second load center line found in this way extends through the city, from north to south, and intersects the first load center line at the load center of the city. This point of intersection or load center may be considered for purposes of computation as the point at which the entire maximum consumption of the city is concentrated.

Having this load center, and having the maximum amount of gas that will be delivered to this point, his next step is to determine the quantity of gas pumped from each distribution station, assuming that the initial pressure at each station is the same at peak load.

Let us name the 3 distribution points A, B and C, and their respective distances from the load center x, y and z, Q being used to denote the quantity of gas pumped.

Then: Qa = gas pumped per hour from station a
Qb = gas pumped per hour from station b
Qc = gas pumped per hour from station c
Qt = Total maximum consumption per hour in city.

We now have the following equations:

$$Qa + Qb + Qc = Qt$$

Also: $\frac{Qa}{Qb} = \frac{vy}{vx}$ $\frac{Qa}{Qc} = \frac{vz}{vx}$ $\frac{Qb}{Qc} = \frac{vz}{vy}$

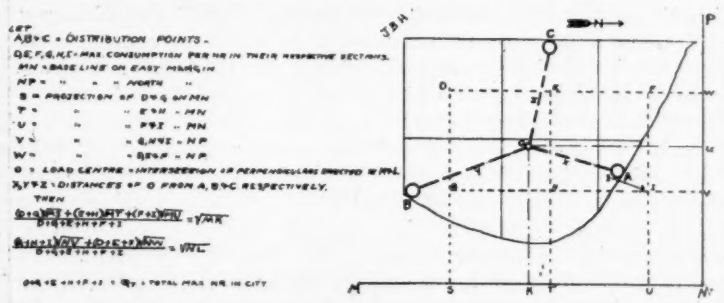
Knowing Qt and x, y and z, we can solve for Qa, Qb and Qc.

Our manager now has the maximum sendout from each of his stations, and the distance this gas has to travel. He has only to assume his initial and final pressure and he can figure the size of pipe necessary and the capacity of the exhausters needed at each of his plants. It must be remembered that, while the size of pipe figured in the above computations assumes one point of delivery or a concentrated load, the same size will be required to deliver the same amount of gas to a distributed load, because of the greater distances involved.

Our manager, having decided on his high pressure pipe size and his pumping units, now turns his attention to the location of his governors and the low pressure feeder mains from their outlets. In this part of the design of his system he must be governed by the system of mains already in the ground, for these must be used to the best advantage. Here, too, he goes back to his maximum consumption figures, and, taking a group of square miles, establishes their load center exactly as he established his city load center. Assuming the maximum and minimum pressure which he wishes at the consumer's meters, he figures how far, and in what direction, his feeding point must be from this small load center. Here he has the location of one governor. In like manner he locates enough governors to supply the entire city. These governor locations, dotted in on his map, give him a birdseye view of his system.

He now sketches in his high pressure main system, preferably a belt line passing through his three distributing plants, and as many governor locations as practical without making his line too crooked. Those governors which do not lie on the belt may be reached by spurs of proper size to carry the governor output. His system must be laid out with a view to future extensions as the city grows. Having completed the designs of his system, he now proceeds to install it, and we will say at the end of 2 years it is working. In the meantime his city continues to grow, and this growth must be carefully watched.

As his next peak load approaches, after the completion of his system, he again takes his map. Starting from the eastern boundary, we will say, he lays his city out in ¼ mile sections and at each corner of each ¼ mile section he puts a small circle indicating a pressure location. When the peak load season arrives, he summons the largest force of competent pressure takers at his command, and has them take pressure every 5 minutes, on each of his pressure locations, for at least 2 hours, covering the 24-hour peak load period. This gang continues to take pressure day after day until every location is covered. From the records of these pressures he selects the lowest readings and enters them in their respective circles on the map.



He now has before him on this one map his entire low pressure, feeder-main system, high pressure system, location of governors and distributing points, at least 3 years' maximum consumption per hour per square miles, figures ¼ mile pressure readings. He has but to study these figures to determine the direction and volume of growth, the weak points and those that are losing strength, his available surplus capacity, and the points where it may be used to advantage.

With the aid of this map he has completely overcome his difficulties of distribution, he has laid the foundations of a permanent system, and greatest of all, he has established pressure conditions which will insure the economical and efficient operation of his consumers' appliances. He has an ideal distribution system.

Discussion.

The President—Not wishing call on anyone in particular, I would like to hear some discussion on this paper. If not, has Mr. Hirst anything further to add on what he has already written.

Mr. Hirst--The paper itself applies, or would seem to apply, to one city. The same system of computation might be applied to a group of 7 or 8 small towns, all to be supplied from one system. In this case the towns would be considered individually. Applying the theory to the group of towns, the most economical point of distribution or the location of a central station could be established.

The President asked if there were any

ADDITIONAL APPLICATIONS FOR MEMBERSHIP,

and Mr. Newberry read the following names:

Anderson, R. W. J. Barrett, A. T. Denlow, C. K.

The Secretary was instructed to cast the ballot of the Association in favor of the election of the gentlemen named, and subsequently reported that the instruction had been carried out.

(To be Continued.)

[Continued from Page 12.]

FOURTH ANNUAL MEETING, SOUTHERN GAS ASSOCIATION.

Held in the Seminole Hotel, Jacksonville, Fla., April 17, 18 and 19, 1912.

Second Day—Morning Session.

Discussing the Daines' paper on Gas Lighting in the South.

[For the text of the paper, see *ante*, p. 12.]

The President—The paper is open for discussion.

Mr. Bowlin—I never worked for a combination company, but often heard that gas in the lighting field of a combination company generally got the short end. As Mr. Daines said, they were permitted to go out at every other class of business but gas lighting. Why is it that the gas man in a combination company should not be permitted to sell his product as well as the electric man? Why is it that the gas man is told to keep off? Is it that the electric man is afraid the gas man will put the electric plant out of business? I don't know, but I would like to find out. I think a good many companies, in selling gas for lighting say "gas is cheap." The electric company doesn't say that, yet it is a pretty good competitor. Why should we cheapen our own product by saying it is cheap, as Mr. Daines says? Why cannot we get the business on a quality basis? We have the best light, for color value, and I don't see why we should cheapen our own product in saying to a consumer, "We have got a cheaper light than electricity." Why not go after the business by saying, "We have a better light than electricity," which we have, and give him a chance to compare the color values. There is the great field for gas over electricity. We are nearer to sunlight than any other artificial illuminant on the market. Advertising of the electric company on the tungsten lamp reads, "The sun's only rival." Why should not we advertise as "The sun's real rival?" for when you compare an electric tungsten lamp with the gas lamp, putting them side-by-side is the best demonstration that you can offer to the consumer as to the best light for him to use. I would like to hear from the combination companies on the question.

Mr. Pierce—Gas lighting is the backbone of the gas industry. Take "Brown's Directory" for the past few years, draw off the send-outs of the various companies and compare them one with another. You will find in nearly every case the companies that made the largest increases are those which have pushed gas lighting vigorously. The uses of gas for lighting are much broader than might generally be believed. For instance, there is the large field for gas lighting in show window lighting, especially in haberdasheries and places where goods which must be shown in their true color value are displayed. In Philadelphia some of the finest lighted show windows are lighted by gas, and some of the most important stores in the city so use gas because of its utility in diplaying color value. Mr. Bowlin notes the cheapness of gas as an actual drawback, and I think so, too, if that feature is talked about too much. At the convention of the Minnesota Electrical Association Mr. Norman Macbeth (then of the Westinghouse Company) presented a paper on "Competitive Illuminants," the gist of which was that gas lighting gives a much better light than the general public suppose. They don't know its good points! they don't know its real economy; and the less the electrical man stirs up the gas man to activity the better for him. In other words, let him sleep. If the gas man isn't going after the business, for heaven's sake don't go out and tell your customers that electricity is as cheap as gas, because that, putting it down to the level of gas, will stimulate the gas man, and if you stimulate him he will do things to you. One aspect of the lighting business in the south is the heat produced by a gas lamp and the objection of consumers on such account. In many cases this is a very real objection, but it can be overcome to a certain extent by installing ventilating ducts on the ceiling. When the building is being constructed such may be put in very cheap and, if properly designed, will carry away the heat from the burners. The radiant heat, of course, is the principal objection, but that can be minimized by splitting up lights into small units, so that a large degree of heat will not be concentrated in any one unit to produce a very high temperature immediately below it. Another reason why heat from a gas lamp is objectionable is the cheapness of gas. The gas man, knowing he has a very cheap illuminant, says he can afford to be liberal with it; so, to be on the safe side, he generally gives the man about twice as much illumination as is required; consequently, he generates twice the amount of heat necessary to adequately heat or light the required area. A more careful design of gas lighting installations would reduce this objection to a very large extent. I have noticed quite generally in gas lighting installations nearly twice the illumination is provided for than is provided when electricity is the agent. If the installations are designed rather to give good, satisfactory service than to consume gas, there will be much more satisfaction, which in the long run will result in the increased consumption of gas, because they will increase the use of gas for lighting. I think this is a subject worthy of a great deal of attention, and I have touched on two or three phases of it this afternoon. One thing I might repeat is that the lighting load enables electricity to become a very powerful competitor for certain uses, and that is one reason why gas lighting is the backbone of the gas business. The more lighting business you turn over to the electrical man the hotter competition he is going to give you on the sale of electricity during the offpeak load for cooking, heating and industrial purposes. I cited English prices some time ago. In the "Journal of Gas Lighting," London, we find nearly half the space in those journals is devoted to thrashing over the relative values of gas and electricity. Electrical concerns are selling electricity very cheaply and are pushing it vigorously for heating and cooking. They are getting a large amount of business, and the extent to which they have succeeded in putting the gas man on the defensive can only be appreciated by looking over those journals. If those who do not receive the "Journal of Gas Lighting" will obtain half a dozen copies thereof and read them over very carefully, I think the competitive possibilities will be put before you in much different light from that in which you view it at present. [Applause.]

Mr. Ferrier—Mr. Daines remarks towards the close, "The future of gas lighting in the South does not depend so much upon improved lighting appliances." I can hardly agree with Mr. Daines in this, much as I would like to. Mr. Daines is a Welsbach man, and we have a Welsbach man here, so you had better sit up and take notice for I am going to hit him. Why is it that in all our appliances for lighting, we can't get any to inaugurate a campaign of high pressure lighting such as they are using now in Germany and England to the great consternation of many of the electric concerns. More than a year ago I wrote to a firm asking them if they could not furnish a closed pan that could be put in on the consnmer's side of the meter, so that we could have in large stores a system of high pressure lighting, that high pressure being produced by gas appliances. They said the idea was a good one, but that is all they ever did about it, and if there is any such appliance on the market to-day I fail to know where it is. The Keith compressor is being extensively used in the old country, but if there is an agent for it in this country I fail to know who he is. Many of us would install some of these high pressure gas appliances if we could get them without having to go to the other side and purchase them. Perhaps some of the appliance men will tell us about this.

Mr. Pierce—I quite agree that improvements in efficiency are essential in every line of manufacture. Every appliance of any description used for any purpose and using any product can be improved in efficiency, and all manufacturers are striving toward that end. But appliances as they are manufactured at present, are not operated at the highest efficiency of which they are capable. For instance, a gas burner is an apparatus which requires constant pressure and constant specific gravity, limitations imposed by the natural construction of the burner itself. It's necessary to have a fixed orifice, whicho rifice, with a mantle of given size, will operate at maximum efficiency at a a given pressure and there is a decrease in efficiency on both sides of that pressure. There are other towns, however, in which the pressure at a given burner will fluctuate from 2 to 4½ inches, and with fluctuations of that sort one cannot operate any gas burner at its highest efficiency. True, you could improve the efficiency 30 per cent., right off the reel, by giving uniform pressure. A large proportion of the gas goes to waste by being burned at other than the maximum efficiency, owing to wide fluctuations of pressure and gas quality. If the gas pressures were as uniform as electric voltages are, for instance, it would be very easy to operate all these appliances at maximum efficiency. A well conducted electrical plant will control its voltage within 4 per cent., and some will go even closer than than that; but you will find comparatively few gas plants which control their pressure within 40 per cent. In the majority the fluctuations of pressure and specific gravity are entirely outside the range of good practice; that holds also for your heating and cooking apparatus. In an article by Mr. Forshaw (a leading gas engineer of

England), on the subject of gas heating appliances, the author lays special stress on the necessity of preserving uniform pressure and specific gravity, so as to obtain the highest efficiency from gas burning appliances. Regarding high pressure apparatus, the Company I represent is in much the same position as the other appliance manufacturers, in that, to a large extent, we must make that which our customers demand. There are, of course, two ways of selling goods, one is to manufacture what the customer wants, the other to make the customer want what you manufacture. Some manufacturers have been extremely successful on the latter plan, but it has taken much advertising expenditure to bring that about. If you are able to determine what is the best article and prove it to your customer, you can generally persuade him that he should use it. However, if you follow the line of least resistance (which most companies do), you are compelled to furnish that for which there is a demand, and there is no demand for high pressure lighting apparatus. I know very little regarding the difficulties of introducing high pressure gas service in this country, but I do know it is receiving a great deal of attention from gas engineers, and the opinion seems that we are coming to it. At the meeting of the New England Gas Association it was brought out very forcibly by a prominent member, who stated that every thing that was done in the way of main construction should be done with an eye to the ultimate possibility and probability of high pressure practice. That, of course, is necessary if the appliance is to be operated directly from the main. Some of those appliances which produce their own high pressure gas have been developed to a very satisfactory point, but the first cost of the installation is considerable. The lamp being a special one is rather expensive. The compressor plant must be installed and there must be a means of furnishing power for making the compression. It can be done very economically by the use of water motors, for instance, or by the use of electric motors, but the latter is hardly a satisfactory system. Systems of that sort have a greater vogue in Europe than I think it would be possible in this country. I am inclined to think that we are coming to high pressure distribution, and when gas companies are willing to make this investment in high pressure mains, you will find the manufacturers will be on the job with a high pressure lamp to satisfy the demand. Experimental work, so far as already justified, is underway, and as soon as there is a pronounced demand for high pressure lamps they will be placed on the market. I don't believe that what you might call the isolated plants, in which each lamp or each installation is equipped with its own compressor plant, will go very far in this country. It isn't good engineering, and I don't believe it is very good practice. I have seen a number of such installations, and believe they have not yet been developed to the point that the conservative engineer is willing or anxious to pin his faith to them. Such is my personal opinion. Perhaps some representatives of these systems are here who can enlighten me on that point. The ideal thing to do is to have high pressure gas delivered in the mains, and having laid down the high pressure mains and put gas into them, I think you can depend upon the appliance manufacturers to deliver the burners and appliances to operate on high pressure gas.

Mr. Ferrier—Mr. Pierce, isn't it a fact that gas has practically supplanted electricity on the streets of Berlin, that is, street lighting by means of high pressure?

Mr. Pierce—It is a fact. I am very sorry I haven't the figures because they are very instructive. In one of the issues of the English "Journal of Gas Lighting," two maps, show the electric street lighting, the other the gas street lighting as in 1901 and 1905. In 1901 practically all the lighting of the principal streets was done by elec tricity. In 1905 electrical lighting had not been extended by any amount worth mentioning, and the map of the gas lighted areas so dwarfed the electrical areas that there didn't appear to be anything in the line of electric lighting. I think one may say that high pressure gas street lighting has driven electric street lighting out of Berlin, at least for the principal business streets. The day is coming when a similar condition will be found in this country. They are considerably in advance of us in Germany, in high pressure practice, having special high pressure mains laid for the street lighting, and these are for lamps which receive their high pressure gas from the mains. Only in a few instances may be seen independent compressor plants for individual portions. I am very glad indeed to have that point brought out, because I believe that the laying down of high pressure mains will give the gas industry in this country the greatest impetus it ever received. I don't believe that we can be too sanguine about the possibilities of high pressure lighting and distribution in general, although from the distribution standpoint, of course, I speak with very little knowledge.

Mr. Congdon—We have often discussed this question amongst ourselves in our weekly meetings and have had some pretty hot discussions on the subject. There is no doubt but that gas lighting is far superior to electric lighting for many purposes, but I always felt that electric light was superior to gas light for other purposes. Mr. Daines takes a very optimistic stand in his statement in thinking and believing gas is superior to electricity for all lighting purposes. I have talked to many of the Welsbach men in an attempt to get from them some scientific or other method of salesmanship which would enable me to put gas lighting in the prominent homes, replacing elecricity; but I have never been able to find anybody to tell me how to do that. Furthermore, in discussing this subject with a great many gas men, I asked how many had electricity in their homes and found a great many of them used electricity. I use electricity. In my own home I also use gas, for I believe that it gives a superior light for reading; consequently in my living room I have two gas lamps with the tube coming up from the cellar over the edge of the table. For lighting the halls electricity offers a convenience which the gas man has not yet been able to meet; that is, the convenience of lighting from up stairs, and when up stairs put out the light down stairs. Going into a bedroom, to be able to snap the button and light the room I think is an advantage, but the gas man can meet that convenience by having a pilot light behind the door. My experience with the Welsbach light, though, is that it is not as satisfactory as an electric lamp. The electric light won't go out, but a pilot light may give you trouble. It is unwise for gas men to take the optimistic stand that theirs is the superior light in every particular, and I think we should face the truth as we see it. I would like to ask if Mr. Pierce will tell me the best argument to cause the taking of electricity out of the homes of the residents on Peachtree street, Atlanta, and get in gas as a substitute.

Mr. Pierce—Mr. Edison when once asked what he believed would be the feature of electric lighting that would contribute most to its popularity, said, "The fact that it can be turned on and off by a switch." The convenience of electric light has contributed more than any other thing to its successful exploitation. I am sorry I cannot say the present time commercial gas lighting appliances on the market offer that same convenience; but I can say, with a reasonable degree of assurance, that they will be upon the market in a comparatively short time. We have been experimenting with this system of ignition known as filament ignition, and developed it first as a self-contained proposition with a battery contained in the lamp housing, the alloy filaments being turned on by a chain pull. The results that we are having from that system at the present time are highly satisfactory. A drawback was the proneness of the dry battery to depreciate, even when not in use, and the consequent difficulty of always being sure that the batteries placed upon the lamp in maintenance were fresh. Improved systems of keeping stock have reduced that, and a special battery has been designed and manufactured for that purpose. Ultimately I see no reason why that system should not be extended, so that practically every convenience, or everything that is now done by electricity in the way of controlling lights may be done by gas. We have two installations on that plan, both of which are working with perfect satisfaction in so far as the ignition system itself is concerned. In one case there are unfavorable conditions in the way of variations in gas quality, but as far as the appliance itself is concerned, the results have been absolutely satisfactory. One of these examples is a church lighted by 49 lamps placed on a number of pillars around the capital of the column in clusters of four, the clusters at the further end of the church having a large number of lamps, making 49 in all, which are controlled entirely from a switchboard in the rear of the church. The sexton on going to the switchboard presses the buttons representing the lights he desires to turn on, and they are lighted forthwith. That system will not be exploited commercially until all the details are worked out satisfactorily. You are all aware of the fact that, preparatory to placing any new appliance on the market, a number of unforeseen problems present themselves, that are seldom insuperable, but which nevertheless require experiment to work out to make sure that, in placing the apparatus in the hands of unskilled men, it will be installed and maintained so as to give satisfactory service. I don't want to hazard a guess as to when we will be able to place that system on the market, but personally I am confident that it will speedily be ready.

Mr. DeFrese—Along Mr. Ferrier's line of talk, gas companies have

very little to draw on from appliance houses with regard to the general public lighting of streets; and I think his remarks are very good with regard to the high pressure or intensifying system used in Europe. From a recent article by Mr. Hall, I find that in many parts of England it is generally the custom that gas lights predominate on the street; in fact, there is very little electric light seen. I have seen a photograph of a high pressure system around Buckingham Palace, where I think they have for 6 years run several lamps of high candle power which are now working satisfactorily. In Chattanooga an agitation was started by its merchants, asking that the streets be ighted and that the city government provide for part of that expense. We undertook to compete with the electric company, but found it very difficult to get any light that we might use on the streets aside from what we already had, which left us little footing in the competition. It was only recently we got a light which compared with Mr. Congdon's great white way in Atlanta. In fact, our committee went to Atlanta, and they saw the electric white way. They didn't know it was possible to have a light of that kind with gas. At the Denver meeting of the National Commercial Gas Association the Sun Vapor and Gas Street Light Co., of Canton, O., installed 5 gas lamps on posts out there, which posts, I understand, have been in use in this country only a year or less than a year, and are really in the experiment stage. So that we have very little to offer in the way of competition on general public lighting of the streets, and I know of very few companies that enter into competition for yearly contracts for street lighting. Fortunately, in this city, we have a very large amount, in fact, more than I have ever seen in any other city I visited; and in fact, part of that duty, if not all of it, lies on our progressive friends here in the sale of appliances, I speak particularly on the sale of gas lamps. The two types that Mr. Ferrier mentioned there, I think are examples of the self-intensifying system and also the high pressure system.

Mr. Dean—I would like to say, in connection with this lighting proposition, I light my house entirely with gas, and only one burner has a pilot or a bypass turn down. I also have one Junior Welsbach light with a bypass and no pilot, which has been in operation continuously since Thanksgiving Day. Now, there is a record for a Junior Welsbach used with a bypass. I also used the pneumatic system of lighting burners which I bought in Jacksonville two years ago. It has been in use two years and has never given me any trouble. It got out of order once, but that was my fault, and I found one could go up stairs and turn out the light after having turned it on down stairs. I know my attention was recently called to a case where a reflexolier pilot had not been out for six months.

Mr. Case—After all this discussion between the relative merits of gas and electricity as illuminants, let me call your attention to a rather unique gas installation in this city in which I think you will all admit the superiority of that illuminant over electricity. I refer to the town clock just opposite us on the city post office, which is lighted by gas. I would suggest that all of you make it a point to look at this clock after dark. I think you all will admit that you never have seen an electrically lighted dial of a town clock that equals the one across the way.

Mr. Brown—While in this high pressure line of lighting debate I would ask the Welsbach representative whatever became of that self-contained lamp that I saw at the Scoville factory about 10 years ago which carried a little engine to increase the pressure.

Mr. De Frese—Will Mr. Pierce answer me if he knows of an installation, either self-intensifying or high pressure, in the United States, similar to those to which I have referred?

Mr. Pierce—Regarding Mr. Brown's question, that apparatus was one of the innumerable experimental ones which the gas man never sees or hears of, or at least very seldom, and we don't get credit for doing the work in consequence. The mechanical difficulties and drawbacks of that system were considerable. It was one of the number of self-intensifying systems tried out experimentally, and upon the result of those experimental trials we decided not to vigorously push that self-intensifying system of illumination. There are several methods of self-intensifying, but nearly all of them are very complicated from a mechanical standpoint, and it's very difficult to make a self-intensifying apparatus that will successfully endure the scrutiny of the engineer. What he wants is simplicity, and when he sees a young gas engine mounted in a lamp with automatic means for lighting, etc., he thinks immediately of the trouble that he would have with that lamp. Another type of lamp was that in which the heat from the burner is used to generate electricity in a thermo-couple, and the current runs a motor which operates a gas compressor. This is a German system. The German will experiment with those things and he will maintain them in a high state of mechanical efficiency, but you cannot get the American engineer to do so. Comparing German and American appliances, especially of the lighting type, we will find the German appliances vastly more complicated, requiring care and intelligent handling, and are more prone to mechanical breakdowns. Take, for instance, the flame arc lamps widely used for street lighting in Germany. It was only by the most vigorous efforts that these lamps were ever introduced in this country, and they were practically ousted when the General Electric Company brought out a simple type of lamp to do the same work. The casing above these lamps contained a miniature watch factory, 2 or 3 dozen cogs, ratchets, pinions, cut-ins and cut-outs, magnets, chains, cables, pulleys, cogwheel railroads, with about everything else imaginable, and that sort of thing simply doesn't favorably impress the American engineer. In Germany they can obtain maintenance men and trimmers more competent than those obtainable at the same price in this country; consequently there has been no vogue for apparatus of that sort on account of the difficulty of maintenance and the mechanical objections. I know of no instance in this country where the self-intensifying system of gas lighting has been installed. Some abortive attempts were made to introduce it, 2 or 3 individuals having obtained agencies for self-intensifying lamps, brought them over to this country and attempted to market them through jobbing channels, but, so far as I know, without success. I believe the entire failure of that system in this country is due to the point mentioned, of mechanical difficulties.

Mr. Congdon—One more remark in reference to this lighting. It's a fact from my personal experience and observation that the inverted gas light is the most popular to day.

Mr. Pierce—Undoubtedly.

Mr. Congdon—With the inverted fixture necessarily a certain amount of metal above the light becomes discolored, which is a great drawback to the use of gas for lighting where best appearances are to be maintained. I have over my dining room table one of the latest inverted light dining room fixtures. It discolors very soon after being put in, and, in speaking of this thing to a Welsbach man 3 or 4 years ago, at one of our Association meetings, he said one of your companies was experimenting with material other than brass for the burner of the fixtures, and for that part of the apparatus above the burner. Is the company doing anything to offset that disadvantage of gas as compared with electricity for house lighting.

Mr. Pierce—It is possible to use certain finishes which render the discoloration not very prominent; that is, a finish of such character that, after a discoloration had taken place, it is substantially that color. Some experimenting has been done along this line, but I am not in a position at present to indicate the degree of success obtained. The principal difficulty is in finding a lacquer to withstand the temperature. We have experimented with lacquers which have withstood several months of continuous burning with a practically negligible indication of discoloration. These lacquers are difficult to apply, requiring different methods of application, and these were very thoroughly gone over before we were able to apply that type of lacquer to the commercial output. If it isn't applied very carefully the product will be non-uniform, and some of it will not give good results, but I have very high hope that the present gas lamps, finished with this lacquer, will be permanent—perhaps not absolutely permanent—but so much so that the impermanence will be almost negligible.

Mr. Davis—It seems this lighting proposition is a very burning one with every Southern gas man. In Mobile, in all probability, we have as hard competition as exists in any other place in the United States. We have a very up-to-date electric company, which has a very low rate indeed, and the Mobile Gas Company is probably bucking as low a rate as any other gas company is competing with in the United States in the electric line. I have to compete on the streets, in the stores, with lighting at 3½ to 4 cents, and an absolutely up-to-date competition of a progressive electric company that keeps as many solicitors on the street as I do. Yet, in the winter time, more than ¾ the commercial lighting of the town is done by us. I am proud to say we get business on the merit of our light, not on its cheapness. We never talk the latter. We tell the merchant we have the best light for his business and get the business on the basis of a better light for the money; but the real thing keeping us out of the lighting—if it were not for that fact we would do ¾ of the lighting in Mobile, even if they sold electricity for 2 cents, for with the proper quantity of gas sendout we expect to sell gas at 50 cents per 1,000—is the heat

proposition. This is what keeps the Mobile Gas Company from selling ¾ of the commercial lighting of our city, and that is the difficult proposition the Southern gas man has to solve before he can get the lighting. You can't expect to get the lighting as long as the electric man sells a ceiling fan which he puts right around your gas, throwing all the heat from your light on the people below; and as long as we can't get some sort of ventilator. It's a pretty hard thing to go into a building, erected within the past 5 years, and endeavor to get them to install some kind of ventilating ducts at a cost of a few thousand dollars so they can use our lights. It's an educational campaign, and it isn't dependent entirely upon the Welsbach Company; but the future, to my mind, of the commercial lighting, at least for the Southern gas man, is the solving of this heat problem. If we solve that we will get the business, because, as I say, I don't care how cheap the electrical man sells his current, the gas rates are coming down faster than the electric rates, and we have the best light. [Applause.]

Telegram to the Centenary Assemblage.

The Secretary—The Committee appointed to send a telegram of greeting to the Philadelphia Centenary sent the following:

Jacksonville, Fla., April 17, 1912.

Centenary Celebration of Gas as an Illuminant, Franklin Institute, Philadelphia, Pa.: The Southern Gas Association in session at Jacksonville, sends felicitations and greetings to the Centenary Celebration, and extends hearty sympathy and congratulations.—H. B. Hoyt, President.

Committee on Time and Place.

The Committee on Time and Place has been appointed as follows: Messrs. James Ferrier (Chairman), John Collins and M. T. Walker. The Chairman advises me that that Committee will hold a meeting immediately after the adjournment of this session, that meeting to be for the purpose of hearing any representatives of any city which may be desirous of entertaining the next annual convention. The Secretary also made other announcements respecting local entertainment, etc.

An Invitation to the National Commercial Gas Association.

The President—Are there any other announcements?

Mr. Rushin—Most of you remember last year there was a resolution passed by the Southern Gas Association inviting the National Commercial Gas Association to hold its next annual meeting in the south. The National Commercial Gas Association granted our request, and I think it is proper and right that the Southern Gas Association should show its appreciation to the National Commercial Gas Association in coming south with their meeting this year. So I would like to see the Association adopt this resolution:

Whereas, The Southern Gas Association, at its third Annual Convention, held in Montgomery, Ala., adopted a resolution requesting the National Commercial Gas Association to designate the City of Atlanta, Ga., as the place for holding its Annual Convention in the year 1912; and,

Whereas, The National Commercial Gas Association has accepted the invitation and will hold its next Annual Convention in Atlanta, Ga., therefore be it

Resolved, That the Southern Gas Association appreciates the fact that the National Commercial Gas Association, in recognition of the important place which the South occupies in the gas industry, has designated Atlanta, Ga., for its next Annual Convention and the members of the Southern Gas Association pledge themselves to make every endeavor to render the coming convention the most successful and instructive and enjoyable one that the National Commercial Gas Association has ever held, and also to endeavor to increase the strength and power of the National Commercial Gas Association by securing new members and increasing, wherever possible, public interest in the gas industry. And, be it further

Resolved, That a copy of this resolution be forwarded to the officers of the National Commercial Gas Association.

Whereas, The Southern Gas Association is gratified that the National Commercial Gas Association will hold its Annual Convention in the year 1912 in Atlanta, Ga.; and

Whereas, This Association recognizes the valuable assistance rendered in securing the Convention for the South which has been rendered by the various journals devoted to the gas industry by the publicity and cordial support which they have given; be it

Resolved, That the Southern Gas Association hereby expresses its appreciation of the help given by the various gas journals and instructs its Secretary to forward a copy of this resolution to each of the journals devoted to the gas industry. [Adopted.]

A resolution to adjourn to 9 A.M. the following day was adopted.

Second Day—Morning Session.

President Hoyt called the meeting to order at 9:30 A.M. The business in hand was the reading of various letters, telegrams and other communications, after which the President introduced Mrs. S. R. Dull (Atlanta) who read her paper entitled

A PRACTICAL DEMONSTATION.

I have given this title to my paper because I am well aware that the question uppermost in the minds of you managers and superintendents is, "Will it pay?" That is the test of the serviceableness of any business proposition, and rightly so. I hope to show you that it is a good paying investment for any modern and widewake gas company to put a practical demonstrator in the field.

In the very outset, it will be necessary for me to make two points absolutely clear: First, that the practical demonstration of any commodity is a necessity in these days, and is its most efficient selling force. Second, that the demonstrator must be genuinely practical if sales are to be increased as a result of her work.

The object lesson is the great thing in education to-day. Our modern teachers have found out that Horace was right when he said, centuries ago, "Things seen affect the mind more vividly than things heard." And so it has come to pass that our great modern educators set more store by showing the child the operations of nature than by merely telling him about them. Our best schools do not, therefore, use tiresome words to teach dull facts; but let the child actually see himself how the thing is done.

A great proportion of the best advertising that is done to-day by the producers of saleable wares is done by demonstration. Take, for example, the window demonstrations that have recently become so familiar. Why, any of you dressy gentlemen may walk down the street and learn exactly how to tie your tie to your heart's fancy, if you will only pause in front of the shop window where the clever young man is demonstrating "The only collar on earth that is worth having." Or you can see, in another place, the wonders of a certain make of safety razor. Or, if you look again, there is the suspender chap. Each of these is an adept in his line, and the manufacturers say it pays, and pays well.

I have myself stood long and wonderingly in front a hardware store's window to see the man inside show the assembled crowd how to do 15 different kinds of kitchen jobs with one small utensil. And I have straightway gone in and purchased the said small utensil, so convincingly had the man in the window done his work.

We can hardly walk down the aisles of our large department stores without running into a demonstration of something or other. Here it is face powder or beauty cream; there it is a new way to dress the hair; yonder, it is a soup, a jelly, a breakfast food, or a piano player.

All the producers behind these commodities find that it is a good stroke of business. Some of them have public demonstrations before large audiences Some have a head demonstrator who instructs the salesmen. Others adopt the house-to-house plan. The latter is, to my mind, the ideal method.

It is the consumer we all want to reach. The plans of reaching him may differ, but if we can teach our doctrine, whatever it may be, to the consumer direct, we have won the battle. We have opportunity to carry the message in our own way, and if we know how to sow the seed, we can bank on getting results. While we talk, we can show. And we all know that seeing is believing. For these reasons: I do not believe there is a more profitable method of increasing the sales of our own particular commodity—gas—than that of practical demonstration. What we want to do is to increase the consumption of gas. To do this we must actually show the consumer the proper way to use it. We must convince the doubtful that it is possible to economize by correct methods. We must make the ignorant ones see that the use of gas is so safe, so simple, so satisfactory, that they will feel it necessary to their happiness to use it. We must show the complaining ones how they can avoid excess bills—a mighty touchy point with many folks, and a good one for the company to work on.

I believe it is quite possible for the practical demonstrator to do very efficient work along each and all of these lines. And this brings me to my second point. I said in the beginning that the demonstrator must be genuinely practical if she is to do the kind of work

(*Continued on page* 26.)

THE AMERICAN GAS LIGHT JOURNAL

Entered at the Post Office, New York City, as Second-Class Matter.

Published weekly at 42 Pine Street, New York City.

Telephone Call, John, 2996. Cable, Am-Gas.

A. M. CALLENDER & CO., - - Proprietors.

THOMAS J. CUNNINGHAM, } Editors.
ELBERT P. CALLENDER, }
H. THURSTON OWENS, - Associate.

CHARLES H. WADELTON, Manager.

Agents—American News Co., 11 Park Place, New York City.
Lemcke & Buechner, Berlin, Germany.
Aug. Siegle, 30 Lime Street, London, England.

TERMS OF SUBSCRIPTION.

United States, Cuba and Mexico, $3 per year. Canada, $4 per year. All other countries, $5 per year.
Single Copies, 10 Cents.

NOTICE TO ADVERTISERS.

New Advertisements and changes of copy therefor should be in hand Wednesday noon of week prior to date of issue.

NEW YORK, MONDAY, JULY 8, 1912.

We have received several inquiries from subscribers to the "London Journal of Gas Lighting" for copies thereof, dated April 9th, 1912. Unfortunately, the edition for that date intended for North America was lost in transit per the steamship Titanic.

BRIEFLY TOLD.

Gas Uses in the South.—The discussion on this topic at the recent Convention of the Southern Gas Association which was provoked by the excellent paper on "A Practical Demonstrator," by Mrs. S. D. Dull, will be found on page 20, current issue. It will prove that men are more willing, if not better able, to tell how things should be done than to tell how they have been done successfully; and, in fact, one speaker inquired the methods which should be used to introduce gas into the best homes in the city. He was not answered. He uses electricity at home for lighting and unless the commercial department of his Company can convince him that gas is superior how can he hope that they will be able to convince others? When a prospective builder desires to have a building wired, but not piped, the architect rarely tells him to have both, and unless some radical steps are taken to alter this attitude the proportion of new buildings which are without gas piping will increase annually, and in crescendo ratio. In some of the largest cities of the country, where there is mutuality of interest between the gas and electric companies, very little effort is made to have buildings piped, and this has an important influence throughout the country. Let there be no doubt that national advertising is one of the essentials of a campaign just as much as local solicitation when your competitor is utilizing these methods. Ignorance and prejudice of the real merit of modern gas lighting appliances must be scored against many gas managers, especially those who have not discovered it for themselves, and those who are convinced should wake the laggards up. Again, of what use is combination supply, should one department be of greater initiative force than the tother. The usual thought (and this is positively so) of United States gas men to-day is that the Consolidated Gas Company of this city, is slow in respect of securing business in both divisions; but the real truth is that the Company is positively the fastest in the above respect, of any other Company in the world. It has so managed "its combination" trading that each is independent, although the Edison end cannot yet see it. Hats off to Mr. Walter R. Addicks; and three times three for Mr. W. H. Bradley, our compliments to Mr. Carter—there's the trinity that solved thoroughly the busiest lighting game that ever was played the world over. And these pitted gas against electricity, and electricity against gas, each without fear or favor—merit determined the result. Perhaps some branch of the General Electric Company can teach the Edison Electric Illuminating Company how to sell electric currents! No the perhaps is that the New York city people have solved the duplex problem even if it took years to do it.

Chicago Public Lighting, 1911.—The annual report of the Department of Electricity, City of Chicago, for the year 1911, naturally contains much data respecting the operation of the Department, mainly given to recounting the number and cost of lamps on public account. The total number of all kinds is reported at 39,561—of this total the entities are:

	No. Lamps.
Current:	
Electric Municipal	12,581
Electric, rented, arcs	901
Electric, rented, tungsten	63
	13,545
Gas:	
Mantle lamps	11,966
Flat Flame	5,414
	17,380
Gasoline:	
Open Flame	8,636

Brooklyn Union Gas Company's Show Rooms.—In order that the many gas devices used for heating and cooking, perhaps more especially those along industrial purpose lines, might be shown to better advantage the Brooklyn Union Gas Company has opened a temporary showroom, at 108 Livingston street. The present building is arranged to display industrial appliances in the basement, hotel appliances on the main floor, and the home devices on the second floor. A well diversified line of apparatus is connected up ready for action. The Commercial Division of this Corporation is headed by Vice-President A. F. Staniford, the Commercial Agent is Mr. T. M. Ambler, who recently succeeded Mr. G. W. Gatehouse, after the latter's promotion to the place of Purchasing Agent. The assista nt commercial men are: Messrs. E. Korthaus and D. C. Ebbetts, and the head Demonstratress is Mrs. Eva E. Robertson. The rooms were officially opened the evening of June 24, and among those present were Messrs. Frank W. Frueauff, Louis Stotz, I. W. Peffly, J. H. Mehrmann, S. T. Willson and J. W. McClelland.

Personal.—Mr. Albert Jackson Marshall, who for the past seven years has been connected with the Holophane Company in the position of Chief Engineer, in charge of its engineering department, and subsequently Manager of the architectural department, announces his affiliation with Mr. F. Laurent Godinez, Consulting Lighting Specialist to public utility corporations, taking effect July 1st. Mr. Godinez, who has had a thorough training in all phases of public utility work for several years, has been acting in an advisory capacity to a clientele composed of large combination gas and electric properties. Hereafter this work will be conducted under the name of F. Laurent Godinez and A. Jackson Marshall, Consulting Lighting Specialists. The research laboratory of Mr. Godinez, at 123 Duncan avenue, Jersey City, N. J., will be the firm's headquarters, and also serve as an experimental station for allied public service corporations. The equipment and appurtenances of the laboratory are entirely original and absolutely opposed to that form of stereotyped procedure which recognizes only relative difference in illumination-intensity as a basis for standardization comparisons. Every phase of decoration, applied art, psychology and heretofore disregarded physiological factors have been utilized to place investigations and development of lighting conditions on the highest plane, where they may receive that broad, intelligent consideration which has been precluded by the narrow perspective and commercial affiliations of the "Illuminating Engineer." The successful educational work with representatives of public utility corporations and elaborate public lectures on light, in behalf of relation policies, originated by Mr. Godinez, will be continued. Co-operative work with architects will be conducted by Mr. Marshall, and the plan of extending consultation to decorators and lighting fixture concerns of the highest class will be adhered to. The policy of the firm is to displace time-worn, commonplace procedure, through the exercise of that quality which has been so entirely conspicuous by its absence in present day lighting—originality.

DEATH OF MR. A. E. STEVENS, MINOT, N. D.—Mr. Andrew E. Stevens, Manager of the Consumers' Power Company, Minot, N. D., met death Saturday, June 22d, in an automobile accident, in which his wife was also severely injured. Three other ladies were in the party, on their returning from a short early morning trip in the country. Five miles south of the city going down a steep hill the car ran off an embankment, overturning and pinning Mr. and Mrs. Stevens beneath. Mr. Stevens died within 3 hours after reaching the hospital. Two of the other ladies were severely injured. Mr. Stevens, who was born in Rushford, Minn., February 7, 1869, was educated in the public schools of Winona, Minn., and in the University of Minnesota, Minneapolis, Minn. At an early age his father died, throwing upon him responsibility as the oldest son of the family. He had been in the employ of the Byllesby Company since January, 1911, and before entering their service had several years' experience in shop and street railway work in Minneapolis and St. Paul. He also had been manager of several telephone exchanges for the Wisconsin Telephone Company, and for several years prior to engaging with the Byllesby Company served on the sales' force of the Fort Wayne Electric Works, Chicago office. Mr. Stevens was a member of the Beta Theta Pi Fraternity. In Minot he was an active member of the Commercial, Elks and Minot Gun clubs. He was married to Miss Emma Howard who survives him, as does one son. He was a brother of Mr. Eugene H. Stevens, of the banking firm of Stevens, Chapman & Co., Minneapolis, and of Mr. Arthur Stevens, of the same city. Other near relatives are his mother, Mrs. A. J. Stevens, and his sister, Miss Mae E. Stevens. The funeral was held Tuesday afternoon, June 25th, from the home of his mother, 905 West Franklin avenue, Minneapolis; his employer, H. M. Byllesby & Company, was represented by Mr. W. H. Hodge. Others being present at the funeral included Messrs. Eugene Holcomb, St. Paul; M. L. Hibbard, Fargo; W. H. Brown, Grand Forks; and Herbert Markle, Stillwater. Besides the numerous friends Mr. Stevens made among the Byllesby organization, he was very popular and well liked in Minot. Impressive services were held in Minot, Sunday afternoon, under the auspices of the B. P. O. Elks. Resolutions *in memoriam* were adopted by the Byllesby Luncheon Club, at its regular weekly meeting, June 26th. Mr. Samuel Kahn, of the Chicago office, arrived at Minot Monday morning, and is in temporary charge of the property. * * *

THE DOHERTY MANAGERS' CONVENTION.—The annual convention of the operating heads of the organization of the Doherty Operating Company, was held at Denver, Colo., from June 4th to 7th, inclusive. There were present 75 managers, commercial managers, superintendents and engineers from the several properties, not including 25 or more from the local organization. Mr. H. H. Scott, the General Manager of the Company, presided at all of the sessions. Of these there were two daily, for each of the four days. Practically the whole convention was given over to a discussion of conditions as shown by a mass of statistical data, compiled and presented by Mr. W. H. Gardiner. Some idea of the multitude of these data may be gained from the statement that they included 131 pages of tables on "Operation and Earnings," together with 50 pages on "Business Development." The principal topics discussed, aside from the statistics had to do with "Public Policy," and "Welfare Work" the latter chiefly amongst the employees. A decidedly taking feature of the convention was a dinner, on the evening of June 6th, held in the ballroom of the Brown Palace Hotel. The dinner was an annual affair, being given by the office staff of the Denver Company and to which the visiting managers were invited. There were 165 present and Toastmaster "Tom." Kennedy, of the local Company, kept everyone in good humor. Among the speakers were Messrs. H. H. Scott, M. R. Bump, J. T. Brady, C. N. Stannard, J. F. Dostal, J. M. Mulverhill, B. C. Adams and W. H. Gardiner. Following the convention 35 men journeyed to Seattle in 2 special cars. The majority stopped over for a day at Spokane to inspect the plant. Messrs. H. L. Doherty and Frank W. Frueauff, who had been detained in New York, caught up with the bunch at Seattle and on the evening of June 13th the former gave a dinner to the employees in attendance at the Convention of the National Electric Light Association.

CURRENT MENTION—

MR. C. LOOMIS ALLEN, President of the Newport News and Old Point Comfort Railway and Electric Company, has purchased the plants of the Hampton-Phoebus and Fort Monroe Gas Corporation, which is supplying gas to the lower end of the Virginia Peninsula. The Richmond *Dispatch* declares that the purchase price was not far from $150,000.

THE Third Excursion of the Massachusetts Gas Companies was brought off the afternoon of June 28th, on which date the heads of departments of the Boston Consolidated Gas Company, the East Boston Gas Company, the Newton and Watertown Gas Light Company, the Citizens Gas Company, the New England Gas and Coke Company and the Boston Towboat Company, with the conveying aid of the seagoing tug "Orion," visited and inspected the Company's huge gas and coke plants at Everett, Mass. Later on a royally put up, well served dinner was enjoyed at Pemberton.

"ON the 29th inst. 60 of the office and shop force of the Harrisburg (Pa.) Gas Company enjoyed an outing along Conodoquinet Creek. Fishing tackle, baseball outfits, quoit layouts and lunch baskets were important parts of the baggage, possibly the last named being the most reassuring and positively promising portion of the load. The West Shore picnic grounds afforded the rendezvous, and the score cards of the ball game—it was surely an unprofessional affair—were not half big enough to keep track of the scorings. Talk about runs; your New York Society of Gas Engineers, on their famed Astoria grounds, never scored as many tallies as the Harrisburg men did on the West Shore field the day before the last day of June, 1912. 'Tis well the last day of June was the Sabbath day. The dinner, however, could not be excelled, although the gentlemen who carried the fishing tackle did not contribute very much towards putting things in the larder. Better not say anything about the quoit pitching, since if your scribe reported who the spitzboob was he might not find favor in the eyes of the high. 'Twas our first trip out since the Harrisburg Company was purchased from the original Hollanders; but it won't be the last.—V. T."

A CORRESPONDENT in Regina (Saskatchewan), writing under date of the 29th ult., informs us that, on the day prior, the Committee on Works of the Settlement of Edmonton, in reporting to the Council of that city, made these recommendation in respect of a gas supply: "Gas at $1.25 per 1,000 cubic feet, gas mains ample for the residents of the entire 2-mile circle, demanding gas by the end of March 31st next; cost of mains to be assessed on a frontage tax basis; gas mains extensions to all parts of the city demanding gas as quickly as possible to be laid—and the immediate submission to the voters of a money by-law authorizing bonding for $200,000." All these constitute a syllabus of the preliminaries towards establishing a municipal gas plant in Edmonton.

THAT the Davis & Farnum Manufacturing Company is enjoying a goodly share of orders in the gas construction field we may note that recent contracts in the line of gas work awarded them comprise these: Webster & Southbridge Gas and Electric Light Company, a 100,000 cubic foot, double lift gasholder, resting in steel tank, to be erected at Southbridge, Mass.; also, steel plate purifiers for the same Company, to be erected at Webster, Mass., together with connections. The Lynn (Mass.) Gas and Electric Company, a 750,000 gallon oil tank; Arlington (Mass.) Gas Light Company a 500,000 cubic feet, triple-lift holder, with steel tank; North Attleboro (Mass.) Gas Light Company a 100,000 single-lift, gasholder, provided with cups for future extension, resting in steel tank; Middletown (Conn.) Gas Light Company a 310,000 cubic feet, double-lift, gasholder, with cup for future extension, also resting in steel tank. Several small holders for storing oxygen are named for erection a Springfield, Mass.; Orange, N. J., and other points.

SEND to "The Atlas Paint Company," of Nashville, Tenn., now for a copy of its catalogue marked "Atlan," which has to do with the Company's specialties in this line in particular, and in a way with the subject in general. Mr. Little may not have been very big when he came over from England some years ago,; but he surely has found in America a climate and a people that have enabled him to advance with speed along safe lines. We also note that his testimonial list carries the names of 33 separate users of "Atlan" product in the gas field.

Publications.

[All Publications, Catalogues, etc., mentioned below, are kept in our office for the convenience of our patrons.]

Coal Specifications and Analyses.—A valuable discussion on coal tests which will be found in "Bulletin 41," Department of the Interior, Bureau of Mines, prepared by Geo. S. Pope, an illustrated description of the fuel-inspection laboratory of the Bureau by Jos. D. Davis is included.

Graduate Work in Engineering.—Descriptive of the scope and value of the work of this character as carried on at the University of Illinois are covered in "Bulletin 34."

(*Continued from page 23.*)

that will pay the company. Let me say that there is all the difference in the world between the practical demonstrator and the other kinds. You may not know that there are other kinds, but there are.

I will illustrate. There are some demonstrators who are so full of technical and scientific terms that they talk above the heads of the women they are trying to instruct. Now, of course, it is important for the demonstrator to have a thorough and scientific grasp on her subject. For my own part I believe that the more she knows about gas, its production, its cost, its uses, the construction of stoves and ranges, about pipes, meters—in fact, about the whole thing, the better she is prepared to handle her proposition. But I contend that it is poor policy to talk above the level of the woman who "calls a spade a spade for the simple reason that she doesn't know what is meant by an agricultural implement." It isn't practical. What this kind of woman needs is plain, understandable, simple explanations. If she asks questions—and it should certainly be the effort of the practical demonstrator to induce her to ask as many as possible—don't give her "hifalutin" answers. She won't know what you mean and she may think the company is going to charge her extra for your large language. Adapt yourself to the case in hand.

The practical demonstrator must know by actual experience how to handle the ordinary problems of the kitchen. Here she needs infinite tact and common sense. For example, it would be foolish to go into a home where the housewife is a tired soul, trying, as she cooks and cleans and cares for her family, to make 1 dollar do the work of 5, and whose chief culinary attainments are fried bacon and poorly-made corn bread, and try to show her how to plank a steak. Your really practical demonstrator will not see here an impossible case. Far from it. She will see a golden opportunity. She can show the woman how to use the simmerer to keep the pot boiling. Show her how to bake and broil with the same fire. Show her how to make the oven do all the work and how, after she gets the oven hot, to keep it so at the lowest possible cost. In other words, she can show her how to "get her money's worth" out of the gas stove.

Incidentally she can drop here a little and there a little on the subject of variety in foods and the economy of buying different and more nourishing things. She can convince her hearer 9 times out of 10 that it will be economy to have more variety, since by the proper use of the gas stove the cost of cooking is not increased. She can awaken an interest in better methods.

The practical demonstrator must know how to handle the various objections which she will encounter as she goes from house to house. She will find the woman who is afraid of gas, who has read in the papers about an explosion somewhere; and she always was "afraid of the old thing, anyhow."

She will find the woman who declares she's going to stop using gas because of excess bills. This woman is apt to revile the company and say exceedingly uncomplimentary things about meters, meter readers and such like. She will find the woman who does her marketing a la telephone, gives her housekeeping absent treatment, leaves everything to her cook and maids, and then complains that her bills are outrageously big, particularly gas.

All these, and others which I do not mention, must be met with a pleasant manner, a convincing argument and a ready answer. The demonstrator who can *not* do this will not succeed. Her business is to make friends, not enemies, for her company. She cannot afford to antagonize these objections in the slightest degree. She cannot afford to display an air of superior wisdom, although she may know that she is dealing with rank ignorance. She cannot be critical, even when she sees things of which she strongly disapproves. She must, in a word, bring to her task the very best quality of tact and good manners.

The practical demonstrator who seeks to be worth while to her company will grasp every opportunity to inform herself on her work. She will constantly broaden her information and her point of view. The more general information she has the better her work will be. In many instances, if the demonstrator is able to give her "pupil" a bit of help about some household problem, a suggestion for a menu, a new way to serve a dish, or something of the sort, she can open the way for the real business in hand. Some women have what might be called a resentful manner toward the demonstrator. They've used gas stoves for years, they'll tell her; and, what more is there to learn? When the demonstrator graciously explains that it is to instruct in its economical use she has come, the case at once becomes different, and she is invited to proceed. It all depends on the spirit in which you meet the matter.

To sum up the whole thing: The really practical demonstrator will do these things; she will be so familiar with her subject that she can talk on it technically if necessary. She will not talk above the heads of her hearers. She will convince consumers that there is only one right way to get the best results, and that she is going to show them that way, She must inspire confidence. When she does this, her path is easy. She will seek not only to gain the confidence of the people whom she is instructing, but to establish a relation of the utmost frankness and helpfulness. She will never fail to leave the impression that the demonstration is made absolutely in the interest of the consumer. She will teach cleanliness and show the bad results of a lack of attention to this point. She will always show the economy there is in utilizing the various appliances that are now to be had for using gas. She will not forget, of course, that her specialty is gas, not gas utensils, but if she finds out that a heater is needed, it is a very easy matter for her to describe the advantages of having one. If ironing is going on, she can readily suggest the comfort of a gasiron. There are a score of ways along this line in which she can be really helpful both to the consumer and the company. She will, above all things else, put her heart and her conscience into her work.

These are the qualities that, in my opinion, will make a demonstrator practical and competent. Can you for one moment believe you are wasting the money you are paying for the services of a representative of this kind, going into the homes of the city among the rich and the poor, the ignorant and the enlightened, the high and the low. Far from it, you are investing the money so expended in the wisest and most profitably effective possible way.

I honestly believe that such a demonstrator can do more to establish pleasant and profitable relations between the consumer and the company than any other agency that the company may employ. When you touch the home life of the housewife you touch her greatest interest. When you show her how to do things better, and how to increase the efficiency of her equipment, how to economize and especially how to appreciate the fact that the company wants, above all things, to make a friend of her, you have done a splendid task. You have put into motion forces that will inevitably do the work that we are all most interested in accomplishing, and that is, increasing the sales of our commodity and the correct use of our ranges.

Discussion.

The President asked the First Vice-President to assume the chair.

Chairman White—The two gentlemen that were to lead in the discussion are not here this morning. I don't know how you all feel about this paper, but, with the exception of one other, it is the most valuable contribution to the meeting. Those who have been identified with demonstration work can appreciate its true value, and I certainly hope we may have a wide discussion of it. I am going to ask Mr. Davis, of Mobile, to lead off, and then I would like to have Mr. Congdon give us his experience in Atlanta. Let us have a full and free discussion.

Mr. Davis—I am not prepared to discuss this paper, but I have read it and have also listened to it with a great deal of interest. It is about a subject that is of the utmost importance to all gas companies. The money spent by gas companies for this practical demonstration work is the money that brings in the greatest dividends to our stockholders. I believe there is no other line of effort that repays us so well. I cannot let the opportunity go by. Of course, we all know more about our own plants and the conditions we meet in our own towns than we do about other properties, so our observations must be along the line of our own personal experience. The Mobile Gas Company is about the oldest gas company in the United States. Our plant was started in 1834, the pipe was shipped to Mobile from England, the retorts, and, in fact, all material practically used in the first plant, came from England. We went to Mobile six years ago. Then our Company had only about 700 ranges in a town of a population of 55,000 to 60,000 people. We endeavored to place ranges in the homes of the better class of people, to find out, unfortunately, that much of the housekeeping was done through the absent treatment Mrs. Dull speaks of, but after much work on the part of a persuasive solicitor we succeeded in putting ranges into some of those houses. Frequently we were met with the complaint that the cook would not use the range after it was put in, exclaimed "Good Lawd! I done can't use that 'ere thing." The woman would reply, "Well, I am afraid you will have to take back that range. My cook says she will leave if I keep it in the kitchen." We sold many ranges to people who, doing their own work, took a personal interest in their kitchen. After a year or so we ran against this proposition. We had several pros-

pects in Mobile whom we could not reach at all, because the ladies took no interest in their kitchens, and the cook would not use a gas range if placed there. We started demonstration work. That demonstration work, I believe, is familiar to many of the members of the Southern Gas Association, but, if it is not, I believe it of sufficient interest that a short description of it be given. The best way to reach those consumers we thought was through the cooks. Then it was how to get the cooks interested in a practical demonstration! I tried to get a practical demonstrator first, and, let me right here, say it took me a year after I fully decided to get one. I had six, some of which lasted 2 weeks, others two months. At the end of a year after deciding on that campaign, I succeeded iu getting a demonstrator who, practical and efficient, took real pride in her work. We gave classes for colored cooks, and the way we got them was this: The social organization of the colored people being their church, they will do more for their church than for themselves. You might pay some of them $5 a week to do something, but they wouldn't do that something, because they didn't want the money anyway; but if you would agree to give the church $1, they would stretch their necks to help. Going to the preacher and the head of the Ladies' Aid Societies we said: "We will give you $1.50 for every one of your congregation you send to us between 18 and 40 years, who will take 8 cooking lessons at our office. They must take 8 lessons, each of which will last from 2 to 3 hours. Should they take 7 lessons but not take the eighth, we won't give you any money." Well, we had a rather hard time. We wanted 18 people in each class, and started to handle two full classes, who would be given two lessons each week. In that way 2 classes would complete a course in a month, making 4 lessons each week. We had a rather hard time getting the first class started, and we did manage to get about 12 in it. In the second class I think about 8 finished, but by the time we sent 18 $1 bills to that preacher, the first class completed the month's course, and when the second class completed, they got $15. By the time we had been running about 2 months, every nigger church in town heard about it. They all had a class. They wanted to put in gas. They had new carpets for the church and wanted to do so many things. The Ladies' Aid Society was very much worked up about it. For 3 years we ran the classes and before the period was ended almost every white person in town minus a cook came to our demonstrator for one of the girls who had completed the course of eight lessons. Our demonstrator worked well with the colored women. She taught them cleanliness and economy. She taught them the simpler methods of cooking. We turned out in the three years between 800 and 900 cooks, many of them good ones. I have had some of them in my own house. They know how to use a gas range with fair economy, and they know how to cook. You would be surprised how much a practical demonstrator can teach in eight lessons. Of course, these were people mostly who were not in service, but sooner or later many of the colored women of that age, or their daughters, also their sisters or their neighbors, knew what gas is and are not afraid of it any longer and when they got into service we found we could put the best cabinet range we had, as a general rule, into that house. Most of them had the old type range rusted out. Possibly only one or two burners could be lighted on it. When these cooks went into these homes, or within a short time afterwards, invariably we would put in a nice type of cabinet range, and would pick up as consumers parties whose gas bills would run $5 to $12, even $15 a month. It cost us some money to do it, and the question in my mind two or three times was, "Has it paid us; can we see the results?" But a little bit later we let up on our colored classes. Having some other line of demonstration work which we were figuring on, I wanted my demonstrator to be able to get out on the street a little oftener, but she couldn't do it. Part of her morning she spent in following up our stove customers, her cooking classes, and worked in the afternoon. But she commenced to get inquiries from the ladies like these: "I want to have a cooking class like my cook attended. I want to learn something about cooking; we would like to pay you for it." Very shortly she got up a class of 18 young housewives, rather, they got up the class, and asked her to teach them. They wanted to pay for it. I told her to go ahead and let them pay for the first course, and afterward she could refund them the money. I thought maybe they had better pay for the first, but before that class finished she had given them a course of 8 lessons. Having so many applications for the classes—she started one and then another one—from the ladies whom we could not get to go into their kitchens 3 or 4 years before. Then, a little bit later, we got so many applications that we started a series of public demonstrations in them all two days a week to take care of the women who felt aggrieved because we, being a public service corporation, could not find room in our cooking classes to take care of them. That is what domonstrating work has done for the Mobile Gas Company. It didn't cost us very much money compared with the money we spent on our plant, in our new busines, department or any other business. In fact, it is one of the smallest regular expenses we have, yet I fully believe it has been one of the things contributing most to our success, and feel we have been fairly successful, because we have increased the sales of gas in Mobile in 6 years 500 per cent. [Applause.]

Mr. White—Mr. Davis, does your demonstrator follow up range sets?

Mr. Davis—Every morning.

Mr. Congdon—Mr. Rushin is the little Georgia man who has succeeced in catching Mrs. Dull for us, and as he is in much closer contact with her work, he will no doubt be able to talk more interestingly in connection with it. I thoroughly agree and approve everything she has written here. She has described herself in advocating a practical demonstrator; in fact, she is the "real thing." I fully believe it would pay every gas company to have a practical demonstrator in the field. In fact, one is not enough, for we know it is a popular thing with the people. Looking over the weekly reports from time to time I find many call backs. Often I find a demonstrator has been called back to a house 4 or 5 times; that is, where the demonstrator has succeeded in interesting the person in cooking some particular article or in learning something, and she goes back. In my paper relating to our efforts to please our customers no mention was made of the work of Mrs. Dull: I will blame that on Mr. Rushin. He said that Mrs. Dull was going to speak for herself, so that she has that little job all her own, and this is really a part of my paper. Before we send out any papers from our Company it is customary for Mr. Arkwright to read them. Mr. Arkwright read this paper from the typewritten sheets. Mrs. Dull's name wasn't on it, and he came into my office and he said, "I want to congratulate you, Mr. Congdon, on that excellent paper you wrote." There I had to take a back seat. I said, "Mr. Arkwright, I didn't write the paper; you will have to give the praise to Mrs. Dull." "Well," he said, "It's an excellent paper, one of the best I have ever read on the subject." There is no doubt that a woman can do much more for the housewife than men can. I think it is certainly a very popular move to have a person who first knows how to cook to go into the house and talk to the woman interested in the cooking, and when you give that service for nothing it certainly can't help but make your company popular and thus help increase your sales; but the particular stress I lay on it is the factor for good. I know it helps to increase our sales, and I feel that the strong point is making friends for the Company. Mrs. Dull says, "I honestly believe such a demonstrator can do more to establish pleasant and profitable relations between the consumer and the Company than any other agency that the Company may employ." And I think she is entirely right. I would like to hear from Mr. Rushin, who, seeing Mrs. Dull every day, knows the routine of her work.

Mr. Rushin—Mr. Davis got a demonstrator 5 times as quickly as I did. It took me 5 years, whereas he got one in one. The principal thing that I just want to speak on is not so much in selling gas ranges as in holding those we have. Getting a complaint about a large bill, of course a man looks after the meter readings and tries to find where the gas went and explains it to the people so it will satisfy them to be willing to part from their money. Mrs. Dull shows the people how they can economize on a gas range, and her work along this line has certainly been valuable to the gas company. To start with, the people are interested, because they complain to you and they are willing to listen. When you have a lady demonstrator as popular in your city as Mrs. Dull is in Atlanta, and you mention her name, they are very anxious immediately to see her; both the lady of the house and the man. I have said to a lot of men who complained on the bill, "We would be glad to send Mrs. Dull out." Some of them said, "Yes. How soon will she come out? I want to go into the kitchen and learn something about that myself as well as my wife and c ok."

One thing I noticed in going around with Mrs. Dull. I begin to talk first about the meter and the size of the bill and how much has been consumed since the last reading, but they don't seem impressed much with what I say. The minute Mrs. Dull starts, it seems all the trouble just flies away, and the gas business is soon forgotten, and they enter into a general conversation, and they wind up with a love feast. [Laughter.] Sometimes its very embarrassing to me, because she is invited back to dinner or supper or to take an automobile ride, and I am left standing there. [Laughter.] The value of such a demonstrator to a gas company cannot be estimated at all. I learned this about 8 years ago from Mr. Philmer Eves in Indianapolis. I am after two more, so if anybody knows where two more as good as Mrs. Dull is can be found, they can go to the best city in the United States to work. [Laughter.] The other day, the principal of the Atlanta Girls' High School wrote me that she wanted to put in a domestic science course, and desired to know what the rate at which the services of Mrs. Dull was held. I answered by saying that the services of Mrs. Dull were not for sale; the Atlanta Gas Light Company was giving those away to the people of Atlanta. The reply was, "If that is true, I am going to take the money I got the Board of Education to appropriate for Mrs. Dull and make a trip over the United States to find out what I need." That advertisement alone for the Atlanta Gas Light Company was very valuable. The people were willing to pay a high price for the services of our demonstrator, and when they found out it wouldn't cost them anything, this lady went to Indianapolis, Cincinnati, Chicago and Milwaukee. Of course, I lost no time in getting letters of introduction for her to the new business men in each of these cities, as I wanted her to fall into the hands of good people. The result is we are to have a domestic science course in the Girls' High School, something we have worked on for 8 years. Back to the subject of having a school to educate the cooks. It is something we should be doing and we are going to do. We haven't the space now for this school, but as soon as we can provide it, I shall copy as near as I possibly can Mr. Davis, of Mobile, and Mr. Eves, of Indianapolis. It is almost worth a trip to Mobile to see their gas works. It looks more like a park than a gas plant. Their offices are as clean and neat as a pin, with everything in its place, and Mr. Davis should certainly be congratulated on the manner in which he has handled things generally in Mobile, especially the demonstrating part of it. Twice I went all over his system, and I believe it was in Mobile where the cooking classes for colored people were started. That is doing much in the South, because we have the problem of colored help with which to contend, and every gas man is trying to

find out how to overcome that. Mr. Davis has done much towards solving the problem, and we in Atlanta should be able to do likewise, for we have the largest population of colored people resident in any other city of the South, outside of New Orleans. The number I think will figure 35 per cent. of the population. In Atlanta one of the finest colleges of any kind in the South is for colored people. They paid $840 for a domestic science course, but one trouble with that is few of those colored people stay in Atlanta. Being highly educated, they leave the city immediately on graduation to go somewhere else, so it does us very little good. It doesn't cost us anything, and we get a revenue from the gas which amounts to about $40 a month. However, it's doing the gas business good in a general way, and I was much surprised to know that our Board of Education, while not wanting anybody to know it, was going to copy after this colored college. Possibly 8 lessons are ample for a colored person (it would for white people) but when the domestic science course was opened in that colored school about 7 years ago, they used as a domestic science teacher a woman from London who taught the school for 1 year. She was under contract for a year at $250 a month, and that is the only way they could get a white teacher in the school. They put a new one in every year, under contract for a year, at a very high salary. I took a course in domestic science in this negro college, and found out that a white girl could learn anything 3 times as quick as a nigger. They stood us all up along the wall. The blackboard was on that side, and I was at the head of the class. [Laughter.] That woman would stand there talking and having to repeat it so often that I knew it by heart before anyone of the darkies could even find out what she was talking about. This is what makes it discouraging for a white person to try to teach a colored one who doesn't know anything about it. This is how I absorbed the idea that 8 lessons will be hardly sufficient to teach a negro how to do anything. When I start my school in Atlanta, I shall give them at least 12. I think we will get better results. I wish somebody would tell me how they sell the rich people in their city gas ranges on which to cook. Peachtree street is about the poorest gas consuming street we have in Atlanta, and until we sold automatic water heaters we had on it practically no consumers. I don't believe 10 per cent. of the people on that street had a meter in the house; now, I think, there are about 50 per cent. We kept after them. It's a hard matter to get a solicitor who will work the high class consumer like that, for after you sell them a range, and the first month's gas bill is about $20 for cooking, they side track their range and go back to coal. The worst problem we have in Atlanta is to get wealthy people able to pay for gas, to pay for it. We have consumers using $20 worth of gas a month, on an automatic heater, and as much on a gas range, who don't complain about it. We have two meters—one for the heater and one for the range; but people burning $40 a month are not sufficiently numerous. If we had them all, I don't know that I would be dependent on the Southern Gas Association; but I want at least 80 per cent. of them, so if some man here can give us any information about that along the lines of demonstration, I wish he would do so. We have been able to hold a great deal of the business through the efforts of Mrs. Dull, because they are personally acquainted with her. She shows the lady of the house and the cook how to use the range, and I have found out if you will show people you are thoroughly interested in them, they will usually pay you the money. Even though they think it's a little too much, they won't discard it, for you leave them under the impression that they are getting a square deal. One more word about demonstrating: An ounce of demonstration is worth a ton of talk. For 20 years we tried to sell the Nunnally Candy Company a candy furnace, and we never were getting a penny from the Company's President, Mr. J. H Nunnally. Any Southern man who doesn't know what Nunnally candy is, never had a sweetheart or a wife, so being a lost soul anyway we won't bother with him. At Mr. Nunnally's candy factory we demonstrated that he could cook his candy better with gas than with any other fuel. We never said a word about its cheapness. When the price came up I said, "Yes, sir; you can use coal cheaper than you can use gas, and, if you are going on the expense of it, you can use wood cheaper than anything else, so just have wood crowded up here and have wood under your furnace; but gas can be used to better advantage to you than anything else." It took us about 8 months to get candy furnaces in his factory, so now, when any of you eat Nunnally's candy, know that every pound of it is cooked with gas, and he is the best satisfied customer that we have in Atlanta. He had patience enough to be bothered with me 8 months, and he told me repeatedly, "I would like to throw that thing out of here, but I have never seen anybody in my life work as hard to keep anything in as you have that, and I am going to let you keep on." There is what demonstration will do for you. The same way with our demonstrator, the same with any demonstrator, provided they are like Mrs. Dull says here on the last page: "She will, above all things else, put her heart and her conscience into her work." If you have a demonstrator who will do that, you had better keep her.

Mr. Davis—I won't take up much time, but I wish to thank Mr. Rushin for his nice little compliment about our Mobile gas plant. I appreciate it. He said something about me there that I think ought to be corrected. Mr. George Howsman, of New Orleans, now the New Business Manager of New Orleans, should get the credit for demonstration work, and Messrs. Bowlin and Hoyt, of Jacksonville, should get credit for very many ideas they gave us before we started. We are nothing but cribbers—I am, any way; Messrs. Hoyt, Bowlin and Howsman should get the credit for the work. One thing more to Mr. Rushin. We in Mobile have a street (Government street) that corresponds to Peachtree street. When we took hold in Mobile, Government street was the least profitable street to us in the city; now it is actually one of the best. Indeed, we sell more gas in the residence district on Government street than on any other of our streets. While we were working our colored demonstration we had, every Wednesday afternoon, a class for cooks. At the time we were running that class I did about the same thing that I did with the demonstration. I tried all over the United States to get the right sort of a man, and I had a hard time getting him. When we did get him he only remained 18 months, to my sorrow. That man went from house to house in the better residence district on the plea that he wanted to fix up their gas appliance. He would adjust their ranges or their water heaters, and they generally had a gas appliance of some kind, such as an instantaneous water heater or heater in their bathrooms. He would go into that house with the thought of adjusting their gas appliance. Getting in, he talked to the lady of the house as to the fuel she cooked with. Often she would say, "On the gas range I generally cook the Sunday night supper. I can't use the coal range, it's so expensive. Generally I don't get into the kitchen." He would ask, "What does it cost you to cook?" and the reply was, "Oh, I don't know," and none of them did know. They thought it cost say $2 a month. Wood was used to a very large extent in Mobile for cooking, but there isn't so much of it used to-day. Wood costs in Mobile from $5 to $6 a cord, and a pretty small cord it is. Most of the people who thought it was costing them $2 were really paying from $6 to $12 or even $15. Those people didn't know it. They didn't know now much it was costing them. My man would bring the interview to finding out how much it was actually costing. He would try to get the lady sufficiently interested to look up her wood bills, or would—he was a special representative from the manager of the company—drop in to see the husband at his office down town, and bring the question around to this fuel. Eventually he would get those people to give some consideration, which they never had done, as to what they were paying for their cooking, and it was always 2 or 3 times what they thought it was. Such was the first step towards getting them to use gas. He would tell these people we were running a cooking school. He would tell them we had a Wednesday afternoon class for their cooks and any cook who attended it 4 consecutive Wednesday afternoons, we would give her a chance to draw for a prize. That prize ($25) was given to the lady of the house, to be taken out in gas or for the purchase of a stove or anything else she wanted. She would generally split that up with the cook; she would get $10 or $15 to apply on the purchase of a gas range, the cook getting a $10 bill. That $25 compensated us for the amount of advertising we got from them. Making our demonstrations, getting people to consider the cost of their fuel, with a good soliciter going from house to house trying to talk an all-gas range (he has to be a high-class solicitor), will do a great deal toward getting those rich people of whom you speak.

Mr. Dean—Coming to Jacksonville the day before yesterday, reading this paper of Mrs. Dull, I had read through about a page or two when I made up my mind the best thing I could do was to get acquainted with the author. I had heard of Mrs. Dull; in fact, knew that for 3 years Mr. Rushin had been trying to employ Mrs. Dull for the work she is doing now—and those of you who know my hobby—the inspection and adjustment of gas meters and appliances—will appreciate how thoroughly I enjoyed this paper, and how completely I enjoyed my conversation with Mrs Dull on the topics treated. Up to this time I had no idea there was a woman in the gas business in Dixie who could come as near my ideal, to get at the practical part of the work with the consumer, as I found Mrs. Dull to be. Another thing occurred to me in connection with this discussion and my conversation with Mrs Dull was that the gas companies of Dixie needed somebody to instruct demonstrators. Hardly a gas company but needs one or more pracical demonstrators, and those of you who have heard Mrs. Dull read her paper can readily see she is a practical demonstrator without hearing anything more. It's my belief, if the services of Mrs. Dull could be in part shared by the Southern Gas Association, at least a part of the year, or that Mrs. Dull could be called upon for her services in various cities, when required, for a week or two, part of the year when she can be spared from Atlanta, that a great work can be done toward making demonstrators practical. A thought occurs to me that seems worthy of consideration. I have met a great many demonstrators in my work, and I have in my line met a great many lecturers on domestic science and many good demonstrators, and while there are many practical demonstrators in Dixie, there is need for many more, and I don't know of anyone as competent to train demonstrators as Mrs. Dull. I am surprised Mr. Rushin could think it necessary to go outside of his own force to secure or train a demonstrator. I heard of Mrs. Dull the last three years; in fact, I remember meeting her about that time, but I didn't know Mrs. Dull, the Demonstrator of the Atlanta Gas Company, until the day before yesterday. I must say that, regardless of the point which I raised in the paper read before the Association last year, it is only a man who can go out and teach the points and impress upon the people the importance of the fact that the gas company is not trying to rob them. I believe Mrs. Dull can do that better than any man I ever saw. One thing in her paper that attracted my special attention is "The demonstrator must be genuinely practical if sales are to be increased as the result of her work." Invited by a gas company to attend a lecture on domestic science, perhaps not so much on domestic science as to points on gas cooking, I heard the lecturer describe how to bake hot bread. She told those people (over 200 were in the room) that if they put the bread low down in the oven and start to baking well, allowing it to remain to the extent of 5 minutes cooking, they should then take it out of the oven and put it in the broiler

underneath to brown. I don't want to criti cize any demonstrators, but I did not know of a double oven gas range or any other gas range in which it was necessary to place the bread in the boiler to brown it, or remove it from the oven itself. If that were necessary, I would like to know how anybody could do any cooking on a single oven stove. It's my impression, if that demonstrator could have about a half-hour's talk with Mrs. Dull, she would be more practical. Another but: "We must show the complaining ones how they can avoid excess bills—a mighty touchy point with a good many folks; and a good one for the company on which to work." 1 believe if any one thing will change public sentiment, it's working on the kicker, or the person who has complained of his gas bill. I don't believe there is any prospect in the gas business that is as good as a kicker, particularly if he is a chronic kicker. Last Sunday coming down from New York I had an all-day ride with the head of a wholesale dry-goods house in Atlanta. He found out that I was in the gas appliance business, and told me that there was a prospect of the City of Atlanta having a municipal plant, and he was mighty glad of it. Well, I wanted to get his ideas on why he thought it would be a good thing, and this is what he said: "Why, the company is robbing us; it's something terrible the way we are being robbed in Atlanta!" Well, there was an interesting subject for me, I talked gas and meters and other things to that man for at least an hour, and I don't think he thought, when we got through, that the Atlanta Gas Company was robbing him, although he started last August with gas and his bills gradually went up; in December, when his wife was away, his bill was the largest of any month that he had used gas. Here is the class of people, if you get at them right and change their opinion, that will do more to help a gas company sell gas than any other class of people that you can reach. The Mobile Company's cooking school has done a little bit toward educating demonstrators from other cities. In my rounds among the different gas managers I described the workings of the Mobile cooking school, and in several cases I have advised that they send to Mobile women whom they employed to get instructions. Many times gas companies in small towns want to hire somebody who lives right there, because they can get them a littie bit cheaper. They know the people, and have a certain prestige, as Mrs. Dull has in Atlanta, and if they can only instruct them so they can instruct others, they can accomplish a great deal at less cost. I advised them to send those women to Mobile, and in one case that was done. Mr. Collins of Charlotte could recite the result of sending a very young girl, one that you would hardly pick out for that kind of work, to instruct middle aged and other people in gas cooking, but he sent her to Mobile, and I think you would be interested in the article printed in the Charlotte papers when she returned from the Mobile cooking school. Possibly Mr. Davis will enjoy reading the article on the Mobile cooking school.

Chairman White—Mr. A. H. Wimberly of the Atlanta Gas Company, who is very close to this demonstration work, knows many things of very great value about this subject.

Mr. Wimberly—I am connected with the distributing shop of the Atlanta Company, and there was a feeling through the shops against demonstration work, but that feeling has all disappeared. It was at one time there, but for Mrs. Dull every fitter has the greatest regard, and she has been to an extent responsible in lessening the expense of our department. Mrs. Dull is practical. She knows not only the practical cooking, but, when there is something wrong with the appliance, she knows how to make the right order to have the remedy applied.

Chairman White—I would like to find out the number of gas companies here represented that are doing this class of work. All those who are doing it in anyway, please raise a hand. [Several responded.] One thing more: Do you employ demonstrators? (Yes from several.)

Mr. Walker—Before closing the discussion, I would like to hear from some of the smaller plants. We have heard much about Atlanta and Mobile and others of the larger places, but we should have discussion from some of the smaller companies

Chairman White—That phase of the work appeals to many.

Mr. Brown—In Columbia we carry out this line of work to a certain extent. About 2 years we labored under very serious difficulties, like every other company when they start this work. Appliances were in all kinds of conditions, and all kinds of sentiment were against the use of gas stoves. All those little difficulties that surround the situation of that kind were met with. We had to get hold of somebody to carry out this work. Fortunately, we secured a well known lady who had practical experience along those lines of domestic work, but nothing along the demonstration work in in the strict sense of being a lecturer or a demonstrator before a class. No systematic work had been done until a very well know friend of the Company spent several weeks at Columbia, and started the ball rolling. It gave us an insight into the possibilities of what could be done, and though our means were limited we did start the ball rolling in spite of all difficulties. Then we went at it systematically. First we got hold of a list of some kind showing all the stoves we had sold for a period of about 5 years, then went over those streets systematically, visiting everybody whom we knew had a gas stove. At no prior time had a systematic canvass been made of the town. We didn't know how many stoves we had (we did know how many meters we had out), but how many used lights or stoves we knew nothing about it. Hence, we felt the psycholigical thing was to see people along the lines of our mains, who were old customers. Well, we found everything imaginable; people were putting their bread right on the bakink oven bottom discarding the racks. Just imagine what we found. That will answer without description. It wasn't very long before letters came along asking us to send Mrs. Bower out to see if she could help the cook. To-day we are getting request after request to send Mrs. Bower out to see the cook. Now, it's beginning to come back at us in more ways than one. She is instilling into the people a desire to have a better range, of the elevated, the cabinet type, or baby grand type, with a result we are now replacing single oven stoves and cookers until the point has been reached where we now sell about ¼ of the cabinet or elevated type. The people know it pays them to use nothing less than an 18-inch oven. We have nothing less than an 18-inch oven anywhere. The work repaid us many times over. We haven't got to the "class" yet, for we haven't the facilities; but we will have them soon. When we get a little better equipment you will hear from us. South Carolina has been in the rear so long that probably some of you don't know there is such a place, but, with a little effort, you will hear from Columbia in another year or two. As to the cooking school I have been pleading with our Superintendent of Education for 3 years to get a class among the white girls in the high school. Well, I almost insulted him! The idea of trying to get the white girls to learn how to cook! In fact he invited me outside. He would rather have the room than my presence. However, I am glad to say that about 3 weeks ago he said, "Mr. Brown, I want you to figure on a cooking school." I kept hammering at him—I am not asking any credit for it—but the next thing I did was to go to the colored girls school and put in some appliances for cooking, sold them a cabinet range, about a dozen hot plates (with all due respect to the hot plates) and some ovens, and the colored girls are doing some work there. I don't say it's the best equipment, I don't want to argue that point. We went to the Womens' Presbyterian College, an institution of high standing, and interviewed its principal, who gave it much thought. About 1½ years ago they got a graduate from Columbia University, New York, to come teach the chemistry of foods, and I am glad to say we are doing some work there. An unfortunate part is that many girls who attend the College of Women at Columbia go to all parts of the State, not remaining in Columbia, still I think our business principles should be broad enough to feel that the other fellow is going to get the benefit of it, for we can't tell what time we will get the benefit of the other fellow's efforts. Our experience is quite like that which they are having in Mobile, at Atlanta and in many other places. It has paid us, being not sorry for what we spent. We are only sorry that we can't spend more. [Applause.]

Mr. Dean—One word more—perhaps an apology. In speaking of the work of Mrs. Dull, and her being practical, I don't want to overlook the fact that Mr. Davis, of Mobile, and Mr. Hoyt, of Jacksonville, have as good demonstrators as can be found anywhere.

Mr. Walker—I wanted to provoke a discussion among the smaller companies, for I have been unfortunate in not getting a good demonstrator, and I have been at it many years. I have had ladies that were practical, one who could take a stove apart and restore it as well as any fitter that we had, but she didn't have the other qualifications. She couldn't teach the ladies how to cook. The I had those who could show them how to cook but who well couldn't do the practical part, could not adjust little things, explain away little mechanical troubles that a good demonstrator should be able to do. My experience is unless you can get a woman who cannot only show the ladies how to cook anything, from a corn 'pone to an angel food cake—I put forth that illustration of the ridiculous to the sublime, because such is my idea of it—that a demonstrator in a small town does not justify the expense. I used to go on record as believing in that work, but think that good demonstrators, like artists, are born not made. I took one out of an hospital. The domertic science teacher recommended her highly qualified for that kind of work, but she was unsuccessful because in that she didn't combine all the qualities. She could explain the cooking and the mechanical part, but her address wasn't such as to make her valuable to us in cultivating the goodwill of our consumers. And some little personal mannerism caused her to create a bad impression. We are in the market for a good demonstrator and hope we will be acle to find one some time. From observation, I know and believe that thst expense is justified if we can get the work properly done; but if you can't, I would not advise it for small companies.

Mr. Lyons—Has any small company had experience with a demonstrator coming in from the outside for a short while, and what have the results been?

Mr. Hunter—I represeut the smallest present gas company in number of consumers. Three years ago we secured an instructor in domestic science from a woman's university. We gave the demonstration in connection with the Women's Club. Last year we secured the services of a demonstrator for 2 weeks and conducted a 2 weeks' demonstration at the "Women's Club" morning and afternoon, at the end of which time a number of ladies asked me more questions than I could answer. I was able to get the lady's services for 2 weeks longer. At that time we picked a number of prominent homes that were using gas stoves as auxiliaries, particularly when the cook did not come. We informed each one of those ladies that, if it would be convenient for her, our Miss Harris would call at a certain hour. She devoted an hour to each one of the homes, and I can say that the quantity of gas that was consumed at the homes where she called was more than doubled. A number of ladies of the wealthier class are more or less interested in the fiuer class of cooking, such as cakes. The theory obtained for years in our town that a gas stove could be used to cook on top, but that when you wanted to brown a thing it was necessary to put it in the broiler. This lady showed the housewives in these various homes the real uses of a gas stove. We put in a as result of her efforts 38 cabinet ranges in the better class of

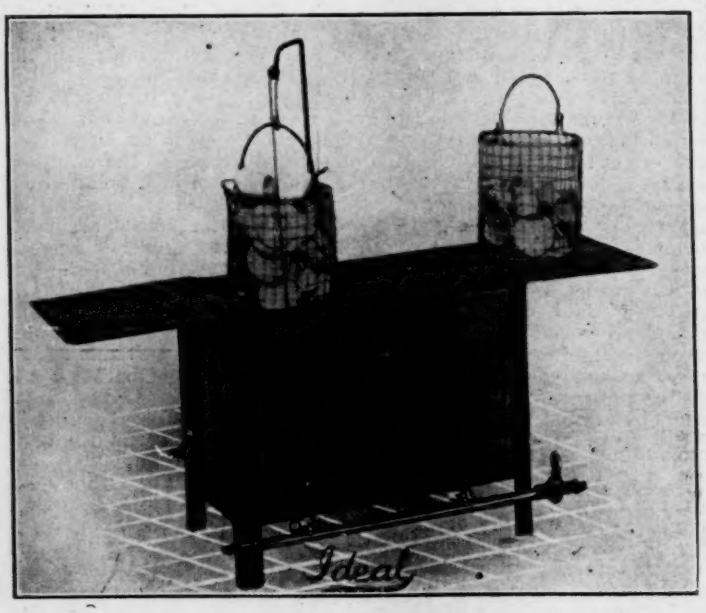
homes, and in doing that each stove in the home was a missionary elsewhere. As far as obtaining the services of a local demonstrator, we have heard it said that a prophet has no fame in his own country, and I am of the opinion that, should we take a young lady demonstrator of our own town, every other good cook in the town, no matter whether she knew more or not, would think she knew more in a minute than did our demonstrator in a week. Mr. Dean has suggested the possibility of securing the services of Mrs. Dull for a certain section at odd times. I don't think the Atlanta Gas Company would be willing to spare her, because good demonstrators are not often found. I believe if my Company secured a practical demonstrator for a month or so, and she would take a young lady that I might be able to furnish and carry her with her in all her demonstration work, the young lady would have more power than in her own home. I, for one, representing a small plant that would be unable to take and maintain a good demonstrator the year around, if I could get a good demonstrator to teach someone and hold up her arms, so to speak, by saying that she knew all about a gas stove, I believe I could keep a demonstrator the year around at a reasonable salary. Through the efforts of our two demonstrations we have succeeded in increasing our meter sales; and in a small town, of a possibility of say 600 to 700 meters, of which I only have 280 odd on, my meter sales at the present time average $6.75 per month per meter, so we are making use of the field such as we have it. As a small company, we are anxious to secure the services of a demonstrator to work the field thoroughly in the demonstration line and instruct a lady that I might furnish. In that case every small gas company in the south—and I speak for my own State here; we have 3, and possibly 4, companies, while 7 little fellows are struggling hard to keep their noses above water—I, for one, would be only too anxious if the Association here could devise some means whereby its smaller members could have the advantage of the skill and knowledge that the larger companies have been able to develop. Our Atlanta friend says he wants to know how to make the rich folks burn gas. Yesterday afternoon the head of one of the prominent homes of this city said she didn't think it was right that the gas companies were educating the cooks so that they wouldn't use anything but a gas company's stove, so she had to buy her cook a gas stove in order to keep her cook.

[On motion fo Mr. De Freese a rising voth of thanks was tendered to Mrs. Dull for her very valuable paper.]

(To be Continued.

Management & Commercial Methods.

THE IDEAL FUEL APPLIANCE COMPANY.—There has just been organized, under the trade name of the Ideal Fuel Appliance Company, a



The Ideal Dishwasher.

firm that proposes to manufacture a line of original and distinctive patented appliances for use exclusively by means of gas fuel. The Company's first offering is an appliance designed to occupy a unique and important place in the economy and convenience of any kitchen for washing, sterilizing and drying dishes and all kinds of tableware. The Ideal dish washer should meet with quick success in restaurants and lunch rooms, where large numbers of dishes are used, and where it is impossible to use the type of machines now on the market, owing to steam being unavailable. Its compactness and very reasonable price should even lead the Ideal machine a step further and put it into competition with the steam operated machines in buildings equipped with steam connections, thereby opening up a new furrow in the field for the consumption of gas. For family use a smaller size of machine, the Ideal Cabinet, is designed. Its many physical advantages and its sanitary features should appeal to the housekeeper. The Ideal method makes a complete change in the most common of kitchen occupations, doing away with chapped and red hands, towels, dishpans and dish rags, which are so familiar in connection with dish washing as performed by the old method, and where the towel that wipes the first dish usually wipes the last. The Ideal method sterilizes the dishes in two changes of boiling water. The hands never touch the dishes or water until after they are washed, sterilized, dried and polished. It is a wonderful time and labor saver, cannot get out of order, and can be operated by a boy or girl with ease. Made in the Company's own factory by men skilled in the business. It is constructed of the best material throughout. Extra heavy castings, galvanized iron and wrought steel are used. Built to stand hard usage; in fact, it is practically indestructible, has no complicated parts, cannot get out of order, always ready for use, will not rust or absorb grease; compact, sanitary and economical; can be set up anywhere; small amount of floor space required. Tanks are removable for changing or cleaning machine.

It is thoroughly insulated, between the tanks and outer walls, with asbestos especially selected for the purpose. This, with the air chamber formed between the inner and outer walls, makes a positive nonconductor of heat, hence producing the highest efficiency with a minimum fuel consumption.

The arrangement of the side shelves is a novel feature, so constructed that the edges fit into grooves or tracks on upper edge of frame, thus forming sliding tops to cover each tank, when machine is not in use and also when closed, serves as a convenient table as well as keeping the tanks in a sanitary condition. Each appliance is equipped with two Ideal double-ring burners, designed by a practical gas man, and adopted after considerable experimenting, owing to its high efficiency. Each burner shows 20 feet consumption per hour full capacity.

Each Ideal dishwasher and sterilizer goes from the factory to the gas company backed by a positive guarantee, which can be passed along to the consumer, to be completely satisfsctory in every respect. This device is really the first practical gas fuel machine of its type with no power required. At present no office is open in New York city, meanwhile the makers may be reached by addressing Mr. W. O. Springer, General Manager, Ideal Fuel Appliance Co., Elizabeth, N.J.

Items of Interest
FROM VARIOUS LOCALITIES.

MR. CARTER H. PAGE, formerly with the U. G. I. forces, and later on at Rockford, Ills., has been appointed Manager of the new plant at Key West, Fla.

THE Precision Instrument Company, of Detroit, Mich.—and we are pleased to note that this sterling concern is putting the conservative foreign houses in the instrument line, such as Eimer, Amend & Co., Keufel & Esser, etc., on the run—has recently received from its English house, Messrs. Alexander Wright & Co., Ltd., with whom most of its apparatus originates, news that the head of its chemistry and research department (Dr. Leonard A. Levy) has just been awarded the degree of Doctor of Science by the University of London. This is a most difficult degree to attain, and is awarded to perhaps a single candidate each year. In addition thereto, Mr. Levy already has the titles of M. A. (Cantab), B.Sc. (London), F.I.C., etc. His personality is of the most pleasing sort, and his advancement is as pleasing to his contemporaries as it is satisfactory to himself.

"B. V. W.," writing from Washington, D. C., under date of the 24th inst., is informed that Mr. A. E. Murray, of Hampton, Va., was appointed Manager of the Temple (Tex.) Gas Light Company about a month ago. At any rate, he officially succeeded Mr. W. H. Frost in this relation the 9th ult.

THE Committee on Graduate Scholarships in Electrical Engineering, Massachusetts Institute of Technology, last month reported as favoring for such scholarships Messrs. R. D. Huxley, A. L. Matte, L. C. Tomlinson, E. L. Bray and H. E. Dexter, these four gentlemen being candidates for advanced degrees in electrical engineering at the Institute. Three of those named were candidates for the degree of Doctor of Engineering. The Faculty concurred in the recommendations, and it is our pleasant province here to say that the popularity of the post graduate study of electrical engineering at the Institute continues to increase, which growth in popularity is beyond a doubt largely attributable to the directing cleverness of Prof. Dugald C. Jackson, Professor of the Electrical Engineering Department of the Institute. He undoubtedly is a pedagogue whose ways are far from those whose pedagogy is altogether (or even largely) of the bookish sort. While conversing with an "under-grad." of the electric division of this grand Massachusetts Institution of tuition, the youngster remarked, "Well, 'Jack' is beyond doubt up-to-date; but let me tell you, his working staff are his great supporters. For instance, where can you

quote me another staff along these lines that equals Prof. Pender—the stern (?); or these associates: impulsive Frank A. Laws; methodical Lawrence; calculating Smith; or spruce Wickenden?"

THE ruffled relations between the proprietors of the Boston Consolidated Gas Company and their gas makers at the Everett plant of the former, have been ironed out satisfactorily. The proprietor sagreed to put in force a 9-hour per day labor schedule, without reduction in labor rate, and this has been acceded to by the men. The latter originally demanded an 8-h our day.

MR. GEORGE W. BECK, the clever Superintendent of the Northumberland County Gas and Electric Company, of Sunbury, Pa., reports that the piping of the Borough of Northumberland is practically completed, and that the small, high pressure mains (Mr. Beck is, as the reader will note, always willing to give the preceding constructor the benefit of the doubt), as stated a few days ago, have been replaced by 6-inch line, and the Tenney system will be discontinued as soon as arrangements are perfected to connect with distribution system at Sunbury. Some days ago the Borough Council of Northumberland passed an ordinance relieving the Northumberland Gas Company from the clause in its franchise under which it was virtually compelled to manufacture gas within the Borough limit. This was the bad obstacle which stood in the way of the consolidation of the plants in the towns. Further, this act shows whether or not the influence of the Pennsylvania Gas Association has been for good. Well; it surely looks that its influence has been of the sort which benefits the consumer by advancing the interests of the smaller companies. Say, for instance, could the gas consumers of Sunbury, Lewisburg, Selinsgrove, etc., ever expect to get a gas rate equal to the prevailing one were it necessary to supply each from a separate works? Not much.

AND here is a word from another clever Pennsylvania gas man, Mr. W. C. Anderson, Manager of the Luzerne County (Pa.) Gas and Electric Company, whose headquarters will hereafter be in Kingston instead of Plymouth, Pa. Mr. Anderson certainly had no idea that we would use his business communication in this manner, but I'm sure he will forgive us, in that our readers will be allowed to share in the knowledge that his practice is bringing about satisfactory results. To begin with, he says:

"* * * Will you please have my JOURNAL hereafter sent to Kingston, Pa., instead of Plymouth, as heretofore. We are just moving into our office building, just completed at Kingston, and that point will be the administration center of our Company from July 1st. The new location will be more central for our increased territory, and it is closer to the larger end of our business. I might add that the building itself is one of the sort that makes one proud of its owners, and I will shortly take pleasure in sending a photograph of it, so you may the better appreciate the homes which we in the slate region possess. It is 3 stories in height, over a deep basement, the interior construction being of re-inforced concrete throughout (through being spelled according to Webster, Worcester, etc.). The showroom extends the entire width (50 feet) of the building, going back to a depth of virtually 70 feet, over all being a 14 feet ceiling. To the rear of this structure is a combination garage and stable, commodious enough to house 11 vehicles, with stable arranging up to the keeping of 6 horses. Some of these days, I'll tell you personally why I've not been in 'Gaynortown' for some time." It would look that he has had enough to keep him in Kingston and Plymouth, etc., for some time. However, he knows where the latchstring hangs.

MR. K. M. Mitchell, General Manager of the St. Joseph (Mo.) Gas Company, has arranged for the construction of new buildings for a new water gas plant which will be installed there this fall. The generating apparatus will comprise two 11-foot water gas sets, the contract for which has been awarded to The Gas Machinery Company, of Cleveland, O. The laying out of these is already well underway in the contractors' shops in Cleveland.

MR. GEORGE MCDONALD seemingly is a warrior bold; in any event, he is a good fighter, as this short tale from Mineola, Long Island, N. Y., surely tells: "The Board of Supervisors refused yesterday (June 25) to grant a permit to the Westbury-Hicksville Gas Company, the backers of which had applied for the use of the county highway to lay gas mains. The refusal of the Board is the culmination of a spirited contest which that Company has maintained with the Public Service Corporation, on account of which Mr. George McDonald secured a franchise to supply gas to the residents of North Hempstead. Some time ago the Corporation obtained a franchise from the Town Board of North Hempstead, provided the Corporation would pay into the town treasury a sum equal to 3 per cent. on its gross receipts. The Westbury-Hicksville Company competed with the Public Service Corporation, but the Town Board negatived the applications and indorsed the application of the McDonald enterprise. Then an application in backing the franchise was made to the Public Service Commission, 2d New York District, for an affirmation of the grant, and this was opposed by the Westbury-Hicksville projectors, who contended that the franchise signed by the Town Board was invalid, due to the failure of the Supt. of Highways to countersign it. The Hicksville combination had a franchise signed by the latter which they claimed was an enabling act for it to go on with gas supply in North Hempstead. The Commission took the stand that the field was too limited for 2 companies to operate, holding at the same time that the consent of the Town Superintendent was also necessary for roads other than the county roads. The Public Service Corporation had its permit to use the county roads granted by the Board of Supervisors some time ago. Shortly after the Town Board of North Hempstead granted the franchise to the Public Service Corporation, the Hicksville folks applied to the Board of Supervisors for a permit to dig the county roads, and it was that permit that was argued upon yesterday. L. J. Smith appeared for the complainants and demanded immediate action. The Board was inclined to allow the Public Service Commission to decide the matter, but the petitioners demanded immediate decision. This they got, for the Board, in executive session, refused the permission or assent asked by the H.-W. combination. Mr. McDonald then appeared before the Board and declared that if the Public Service Commission assented in finality, the people of North Hempstead would have gas some time in August,"

MR. ALBERT B. NORTON, since 1907 Superintendent of the municipal gas and electric plants of Wakefield, Mass., has resigned these attachments to accept the Superintendency of the Rome (N.Y.) plant of the National Gas and Electric Company. He assumes his new duties the 1st prox. He succeeds Mr. R. A. Field in Rome, whose appointment to supervise the Frankfort (Ky.) plant was announced by us some time ago.

THE plant for Billings, Mont., will be constructed and lined up ready for use by October 1st. The connecting machinery was to have been shipped last Monday, and the pipe laying and service trenching staff is already well along.

MR. HARMON BURGI, General Superintendent the Springfield (Mass.) Gas Light Company, has caused the channel between Hartford and Springfield to be suitably marked by means of buoys, Pintsch system He believes that it is only a question of short time when government appropriation for the deepening of the channel between Windsor Locks and Hartford will be allowed, and the consent and appropriation will be worth millions of dollars to the residents of Mid-Connecticut.

Recent Patent Issues.

Prepared for the AMERICAN GAS LIGHT JOURNAL by ROYAL E. BURNHAM, solicitor of patents and counselor in patent causes, 833 Bond Building, Washington, D. C., from whom illustrations and specifications of any patent mentioned below may be obtained for 20 cents.

1,029,084. Gas Producer or Generator. A. J. Rickle, Cossipur, Calcutta, India.

1,029,135. Gas Lighter. E. Lamprecht, Philadelphia, Pa.

1,029,692. Gas Generator. W. Kirkwood, Chicago, Ills.

1,102,696. Regulating and Reversing Apparatus for Regenerating Gas Furnaces. H. Kopper, Mulheim-on-the-Ruhr, Germany.

1,029,830. Safety Gas Burner. W. B. Stoudt, Bernhardts, Pa.

1,029,872. Gas Generator. J. Kilburd, J. W. Fairley, T. B. Kidner, W. H. Irvine, and W. T. Chestnut, Fredericton, New Brunswick, Canada, assignors to Manitor Gas Generator Company, New York City,

I,030,000. Gas Stoves. L. Lebovitz, Pittsburgh, Pa.

1,030,079. Inverted Incandescent Gas Lamp. H. Graetz, Berlin, Germany.

The Market for Gas Securities.

The quotations for Consolidated came in this morning at 143¾ to 144, which is equivalent to a gain of a point in the week. Of course, this "violent fluctuation" will not attract undue attention to the shares; but it is an indication that "all's not dead that moveth." Maybe July will witness the starting of the long deferred boom.

Brooklyn Union also advanced to a parity (143¾ to 144) with its neighbor—and quite some business was done in it. The American Light and Traction Company has declared a dividend of 2½ per cent. on the common; also, 1¾ per cent. on the preferred, both payable the 1st prox. The Company also declared a stock dividend of 2½ per cent. on the common in shares pro rata of common stock. Secretary Jelliffe's notification also carries the information that transfer books will close the 17th inst., to be reopened the 1st prox. The Louisville Gas Company has declared a dividend of 2½ per cent., payable on demand. The Company also declared 2 per cent. on its subsidiary's shares, the Louisville Lighting Company.

Gas Stocks.

Quotations by George W. Close, Broker and Dealer in Gas Stocks.
115 BROADWAY, NEW YORK CITY.

JULY 8.

☞ All communications will receive particular attention.

☞ The following quotations are based on the par value of $100 per share:

N. Y. City Companies.	*Capital.*	*Par.*	*Bid.*	*Asked*
Consolidated Gas Co.	$78,177,000	100	143¾	144
Central Union Gas Co.—				
1st 5's, due 1972, J. & J.	8,000,000	1,000	103	105
Equitable Gas Light Co.—				
Con. 5's, due 1932, M. & S.	1,000,000	1,000	105	106
Mutual Gas Co.	2,600,000	100	165	175
New Amsterdam Gas Co.—				
1st Con. 5's, due 1948, J. & J.	11,000,000	1,000	101	102½
New York & Richmond Gas				
Co. (Staten Island)	1,500,000	100	35	50
1st Mtg. Gold Bds. 5 p. ct.	1,500,000	—	98½	100½
New York and East River—				
1st 5's, due 1944, J. & J.	3,500,000	1,000	103	105
Con. 5's, due 1945, J. & J.	1,500,000	—	95	100
Northern Union—				
1st 5's, due 1927, J. & J.	1,250,000	1,000	100	109
Standard	5,000,000	100	60	70
Preferred	5,000,000	100	90	100
1st Mtg. 5's, due 1930, M. & N.	1,500,000	1,000	103	105
The Brooklyn Union	15,000,000	1,000	143½	144
1st Con. 5's, due 1948, M. & N.	15,000,000	—	106¾	107
Yonkers	299,650	500	130	—
Out-of-Town Companies.				
Bay State	50,000,000	50	¼	⅝
" Income Bonds	2,000,000	1,000	—	75
Binghampton Gas Works	450,000	100	—	—
" 1st Mtg. 5's	500,000	1,000	97	100
Boston United Gas Co.—				
1st Series S. F. Trust	7,000,000	1,000	82	85
2d " " "	3,000,000	1,000	47½	50
Buffalo City Gas Co.	5,500,000	100	5	8
Bonds, 5's	5,250,000	1,000	59	60
Capital, Sacramento	500,000	50	—	35
Bonds (6's)	150,000	1,000	—	—
Chicago Gas Co. Guaranteed				
Gold Bonds	7,660,000	1,000	104	105¼
Cincinnati Gas and Electric				
Co.	29,500,000	100	87	90
Columbus (O.) Gas Co., 1st				
Mortgage Bonds	1,500,000	1,000	96	98
Columbus (O.) Gas Lt. &				
Heating Co.	1,682,750	100	90¼	91
Preferred	3,026,500	100	75½	80
Consumers, Toronto	2,000,000	50	200	204
Consolidated, Baltimore	13,460,084		—	—
Mortgages, 5's	3,400,000		—	—
General Mortgage 4½	10,661,000		—	—
Con. Gas Co., Baltimore				
City, 4½	2,751,000		—	—
Consolidated Gas Co. of N. J.	1,000,000	100	15	—
Con. Mtg. 5's	976,000	1,000	94	96
Bonds	75,000	—	—	100
Detroit City Gas Co.	6,580,000	—	—	50
Detroit Gas Co., 5's	881,000	1,000	75	80
" Prior Lien 5's	5,619,000	1,000	97	100½
Equitable Gas & Fuel Co.,				
Chicago, Bonds	2,000,000	1,000	—	101
Lafayette Gas Co., Ind.	1,000,000	100	—	60
Bonds	1,000,000	1,000	60	65
Louisville	2,570,000	50	143	145
Madison Gas and Electric Co.				
" 1st Mtg. 6's	400,000	1,000	106	108¾
Massachusetts Gas Companies, of Boston	25,000,000	100	89¾	90
Preferred	25,000,000	100	95½	96
Montreal Gas Co., Canada	2,000,000	100	208	210
Nashville Gas Light Co.	1,000,000	100	110	—
Newark, N. J., Con. Gas Co.	6,000,000	—	97	98
Bonds, 6's	6,000,000	—	127	128
New Haven Gas Co.	5,000,000	25	182	190
Peoples Gas Lt. & Coke Co.,				
Chicago	25,000,000	100	113¾	114
1st Mortgage	20,100,000	1,000	102	102½
2d "	2,500,000	1,000	104	—
Rochester Gas & Electric Co.	2,150,000	50	88	—
Preferred	2,150,000	50	118	—
Consolidated 5's	2,000,000	—	104¾	105½
Pacific Gas and Electric Co.	15,500,000	—	64½	65½
St. Joseph Gas Co.—				
1st Mtg. 5's	1,000,000	1,000	98	98
St. Paul Gas Light Co.	2,500,000	100	—	—
1st Mortgages, 6's	650,000	1,000	104	105
Extension, 6's	600,000	1,000	112¾	115
General Mortgage, 5's	3,447,000	1,000	94	96
Syracuse Gas Co., N. Y.	1,975,000	100	50	55
Bonds	2,047,000	1,000	101	103
Washington (D. C.) Gas Co.	1,800,000	200	430	435
1st Mortgage, 6's	600,000	—	—	—
Western Gas Co., Milwaukee	4,000,000	—	—	—
Wilmington (Del.) Gas Co.	600,000	50	—	—

DIVIDEND NOTICE.

AMERICAN LIGHT AND TRACTION CO.,
40 WALL STREET, NEW YORK CITY, July 2, 1912.

The Board of Directors this day declared from the net earnings of the Company the regular quarterly dividend of one and one-half per cent. (1½ per cent.) on the preferred stock of this Company, payable Aug. 1st, 1912, to stockholders of record of preferred stock at the close of business July 17th, 1912. The Board also declared, from the undivided profits of the Company, a quarterly dividend of two and one-half per cent. (2½ per cent.) on the common stock of the Company, payable Aug. 1st, 1912, to stockholders of record of Common Stock at the close of business July 17th, 1912. The Board also declared, from the undivided profits of the Company, a dividend of two and one-half (2½) shares of common stock on every one hundred (100) shares of common stock outstanding, payable Aug. 1, 1912, to stockholders of record of common stock at the close of business July 17th, 1912. The transfer books for both preferred and common stock will close July 17, 1912, at 3 o'clock P.M., and will reopen Aug. 1, 1912, at 10 o'clock A.M.
1935-1 C. N. JELLIFFE, Secretary.

MEETING TIMES OF THE VARIOUS GAS ASSOCIATIONS.

American Gas Institute.—Annual meeting, October 16 to 18, 1912. Marlborough-Blenheim Hotel, Atlantic City, N. J. Officers: President, Ira C. Copley, Aurora, Ills. Secretary, Geo. G. Ramsdell, 29 West 39th st., N. Y. City.

Canadian Gas Association.—Annual meeting and Gas Show, Toronto, Aug. 26th to Sept. 7, 1912. Officers: President, Arthur Hewitt, Toronto, Ont.; Secretary and Treasurer, John Keillor, Hamilton, Ont.

Empire State Gas and Electric Association.—Annual meeting, New York City, Oct. 1912. Officers: President, R. M. Searle, Rochester, N. Y.; Secretary, C. H. B. Chapin, 29 W. 39th street. New York City.

Gas Meters.—Monthly meetings. Chairman, Will W. Barnes; Commissioners, W. H. Pettes, L. W. Pefly; Secretary, H. Thurston Owens, 42 Pine street, New York City.

Guild of Gas Managers of New England.—Annual meeting, March, 1913. Young's Hotel, Boston; monthly meeting, second Saturday. Officers: President, Walter G. Africa, Manchester, N. H.; Secretary, H. K. Morrison, Brockton, Mass.

Illinois Gas Association.—Annual meeting, March 19th and 20th, 1913. Chicago, Ills. Officers: President, H. O. Channon, Quincy, Ills.; Secretary-Treasurer, Horace H. Clark, 115 No. Oak Park avenue, Oak Park, Ills.

Illuminating Engineering Society.—Annual meeting, Niagara Falls, Canada, Sept. 16-19, 1912. Meetings of Sections, monthly. Pres't, V. R. Lansingh, New York City; Secretary, Preston S. Millar, 29 W. 39th street, N. Y. City. Sections: New York, Secretary, C. L. Law, 124 West 42d street. New England, Secretary, H. C. Jones, 10 High street, Boston, Mass. Philadelphia, Secretary, L. B. Eichengreen, Broad and Arch streets. Chicago, Secretary, J. B. Jackson, 28 North Market street. Pittsburgh, Secretary, J. C Mundo, Oliver Building.

Indiana Gas Association.—Annual meeting, March, 1913, Indianapolis. Officers: President, Howard L. Olds, Indianapolis; Vice-President, Wm. Wallace, Lafayette; Secretary-Treasurer, Philmer Eves, Indianapolis.

Iowa District Gas Association.—Annual meeting, Burlington, Ia., May, 1913; Officers: President, C. W. Fair, Atlantic, Ia.; Secretary, G. I. Vincent, Des Moines, Ia.

Kansas Gas, Water and Electric Light Association.—Annual meeting, October 17-19. Manhattan, Kas. Officers: President, B. F. Eyer, Manhattan, Kas.; Secretary and Treasurer, J. D. Nicholson, Newton, Kas.

Michigan Gas Association—Annual meeting, September 4-6, 1912; Toronto, Canada Officers: President, F. W. Blowers, Kalamazoo, Mich; Secretary-Treasurer, Glenn R. Chamberlain, Grand Rapids, Mich.

Missouri Electric Light, Gas, Water Works and Street Railway Association.—Annual meeting, April, 1913; Joplin, Mo. Officers: President, P. A. Bertrand, Joplin, Mo.; Secretary and Treasurer, P. W. Markham, Brookfield, Mo.

National Commercial Gas Association.—Annual meeting and Gas Show, Dec. 2-5, 1912. Atlanta, Ga. Officers: President, C. L. Holman, St. Louis, Mo.; Secretary, Louis Stotz, 29 West 39th street, New York City.

Natural Gas Association.—Annual meeting, Cleveland, O., May, 1913; Officers: President, M. B. Daly, Cleveland, O; Secretary, T. C. Jones, Delaware, O.

New England Gas Association.—Annual meeting, February, ——— 1913. Boston. Officers: President, D. D. Barnum, Worcester, Mass.; Secretary-Treasurer, N. W. Gifford, East Boston, Mass.

New Jersey State Gas Association.—Summer Meeting, August 24, Atlantic City, N. J.—President, William H. Pettes, Newark, N. J.; Secretary-Treasurer, Arthur H. Osborn Belmar, N. J.

Ohio Gas Association.—Annual meeting, February ———, 1913, Columbus, O.; President, John M. Garard, Columbus, O.; Secretary, L. B. Denning, Columbus, O.

Oklahoma Gas, Electric and Railway Association.—Annual meeting, May, 1913. President, Noel R. Gascho, Alva, Okla.; Secretary, H. V. Bozell, Norman, Okla.

Pacific Coast Gas Association.—Annual meeting, San Diego, Cal., September 17, 18, 19, 1912. Officers: President, W. Baurhyte, Los Angeles, Cal.; Vice-President, Henry E. Adams, Stockton, Cal.; Secretary-Treasurer, John A. Britton, 445 Sutter street, San Francisco, Cal.

Pennsylvania Gas Association.—Annual meeting, York, Pa., April, 1913; Officers, President, H. H. Ganser, Norristown, Pa.; Secretary-Treasurer, W. O. Lamson, Jr., West Chester, Pa.

Society of Gas Lighting.—Annual meeting Dec., 13, 1912; monthly meetings, second Thursday. Place, New York City. Officers: President, Fred. S. Benson; Secretary, George G. Ramsdell, 29 West 39th street, New York city

Southern Gas Association.—Annual meeting, April ——— 1913, Charlotte, N. C. Officers: President, C. E. White, Montgomery, Ala.; Secretary-Treasurer, E. D. Brewer, Atlanta, Ga.

Southwestern Electrical and Gas Association.—Annual meeting. April——— 1913, Galveston, Tex. Officers: President, F. M. Lege, Jr., Galveston, Tex.; Secretary, H. S. Cooper, Galveston, Tex.

Wisconsin Gas Association.—Annual meeting, May ——— 1913, Milwaukee, Wis. Officers: President, I. F. Wortendyke, Janesville, Wis.; Secretary-Treasurer, Henry Harmon, Milwaukee, Wis.